## Pioneer

# AUDIO/VIDEO MULTI-CHANNEL RECEIVER

# VSX-D710S VSX-D810S VSX-D850S

**Operating Instructions** 

**WARNING**: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

THE STANDBY/ON BUTON IS SECONDARY CONNECTED AND THEREFORE DOES NOT SEPARATETHE UNIT FROM MAINS POWER IN STANDBY POSITION.

### **IMPORTANT**



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

## CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN

CAUTION:

TO PREVENT THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK). NO
USER-SERVICEABLE PARTS INSIDE. REFER
SERVICING TO QUALIFIED SERVICE
PERSONNEL.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

**NOTE:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

#### IMPORTANT NOTICE

The serial number for this equipment is located on the rear panel. Please write this serial number on your enclosed warranty card and keep it in a secure area. This is for your security.

#### [For Canadian model]

This Class B digital apparatus complies with Canadian ICES-003.

#### [Pour le modèle Canadien]

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Manufactured under license from Dolby Laboratories. "Dolby", "Pro Logic" and the double-D symbol are trademarks of Dolby Laboratories. Confidential Unpublished Works. © 1992-1997 Dolby Laboratories, Inc. All rights reserved.

#### [For U.S. model]



As an ENERGY STAR® Partner, Pioneer Corporation has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

#### [For Canadian model]

**CAUTION:** TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

ATTENTION: POUR PREVENIR LES CHOCS ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISEE AVEC UN PROLONGATEUR, UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ETRE INSERESS A FOND SANS EN LAISSER AUCUNE PARTIE A DECOUVERT.

"DTS", "ES" and "DTS Digital Surround" are trademarks of Digital Theater Systems, Inc. Manufactured under license from Digital Theater Systems, Inc.

If the socket outlets on the associated equipment are not suitable for the plug supplied with the product, the plug must be removed and an appropriate one fitted. Replacement and mounting of an AC plug on the power supply cord of this unit should be performed only by qualified service personnel. The cut-off plug must be disposed of as an electrical shock hazard could exist if connected to a socket outlet.

#### Information to User

Alteration or modifications carried out without appropriate authorization may invalidate the user's right to operate the equipment.

## IMPORTANT SAFETY INSTRUCTIONS

- READ INSTRUCTIONS All the safety and operating instructions should be
- read before the product is operated. **RETAIN INSTRUCTIONS** The safety and operating instructions should be retained for future reference.
- HEED WARNINGS All warnings on the product and in the operating instructions
- should be adhered to.

  FOLLOW INSTRUCTIONS All operating and use instructions should be followed.
- **CLEANING** Unplug this product from the wall outlet before cleaning. The product should be cleaned only with a polishing cloth or a soft dry cloth. Never clean with furniture wax, benzine, insecticides or other volatile liquids since they may corrode the cabinet.
- ATTACHMENTS Do not use attachments not recommended by the product manufacturer as they may cause hazards
- WATER AND MOISTURE Do not use this product near water — for example, near a bathtub, wash bowl, kitchen sink, or laundry tub; in a wet basement; or near a swimming pool; and the like
- ACCESSORIES Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the product. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the product. Any mounting of the product should follow the manufacturer's instructions. and should use a mounting accessory recommended by the manufacturer.
- CART A product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.



- **VENTILATION** Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating, and these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to
- POWER SOURCES This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your product dealer or local power company. LOCATION - The appliance should be
- installed in a stable location. NONUSE PERIODS - The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

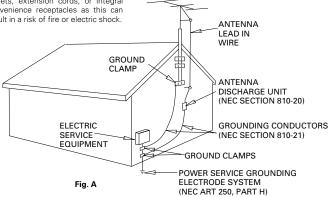
#### GROUNDING OR POLARIZATION

- If this product is equipped with a polarized alternating current line plug (a plug having one blade wider than the other), it will fit into the outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.
- If this product is equipped with a threewire grounding type plug, a plug having a third (grounding) pin, it will only fit into a grounding type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding type plug
- POWER-CORD PROTECTION -- Powersupply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.
- **OUTDOOR ANTENNA GROUNDING If** an outside antenna or cable system is connected to the product, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure
- **LIGHTNING** For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and
- power-line surges.

  POWER LINES An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might
- OVERLOADING Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electric shock

- OBJECT AND LIQUID ENTRY Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on
- SERVICING Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel
- DAMAGE REQUIRING SERVICE—Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
- When the power-supply cord or plug is damaged.
- If liquid has been spilled, or objects have fallen into the product.
- If the product has been exposed to rain or water.
- If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
- If the product has been dropped or damaged in any way.
- When the product exhibits a distinct change in performance — this indicates a need for service.
- REPLACEMENT PARTS replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.
- SAFETY CHECK Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is
- in proper operating condition.

  WALL OR CEILING MOUNTING The product should not be mounted to a wall or ceiling.
- **HEAT** The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.



NEC — NATIONAL ELECTRICAL CODE

## Checking the Supplied Accessories

Please check that you've received the following supplied accessories:

- · AM loop antenna
- · FM wire antenna
- Dry Cell Batteries x2
   (VSX-D710S/D810S: type AA IEC R6P)
   (VSX-D850S: type AA IEC LR6)
- Remote Control Unit
- · Operating Instructions

## **Using this Manual**

This manual is for the VSX-D710S/D810S/D850S audio/video multi-channel receivers.

It is divided into two main sections:

#### Set up

This section covers installing your receiver and connecting up all the other components in your home theater system to it. It also describes how to set up a multi-channel speaker system to take full advantage of the great surround sound features of your receiver.

#### Operation

This section shows you how to use every feature of the receiver and its remote control unit. It also covers using the supplied remote control to operate your other home theater components. To find out more about a specific button, control or indicator, see Displays & Controls starting on page 22. This will point you to the relevant chapter in the manual.

In the Additional Information section (p.50-51) you'll find a troubleshooting section and specifications.

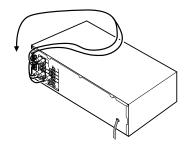
### **Installing the Receiver**

Please note:

- Do not place objects directly on top of this unit. This would prevent proper heat dispersal.
- When installing in a rack, shelf, etc., be sure to leave more than 8 inches (20 cm.) of space above the receiver.

## When Making Cable Connections

Be careful not to arrange cables in a manner that bends the cables over the top of this unit. If the cables are laid on top of the unit, the magnetic field produced by the transformers in this unit may cause a humming noise to come from the speakers.



## **Loading the Batteries**





#### **CAUTION:**

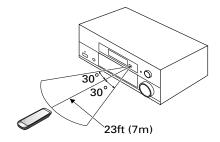
Incorrect use of batteries may result in such hazards as leakage and bursting. Observe the following precautions:

- Never use new and old batteries together.
- Insert the plus and minus sides of the batteries properly according to the marks in the battery case.
- Batteries of the same shape may have different voltages. Do not use different batteries together.
- When disposing of used batteries, please comply with governmental regulations or environmental public institution's rules that apply in your country or area.

## Operating Range of Remote Control Unit

The remote control may not work properly if:

- There are obstacles between the remote control and the receiver's remote sensor.
- Direct sunlight or fluorescent light is shining onto the remote sensor.
- The receiver is located near a device that is emitting infrared rays.
- The receiver is operated simultaneously with another infrared remote control unit.



Congratulations on buying this fine Pioneer product.

Please read through these operating instructions so you will know how to operate your model properly. After you have finished reading the instructions, put them away in a safe place for future reference.

#### 01 Introductory Information 4

Checking the Supplied Accessories 4

Using this Manual 4

Installing the Receiver 4

When Making Cable Connections 4

Loading the Batteries 4

Operating Range of Remote Control Unit 4

#### 02 Contents 5

#### 03 Connecting Your Equipment 6

Audio/Video Cords 6

Digital audio Cords/Optical Cables 6

Connecting Digital Components 6

Example Connection for a DVD/LD or LD Player 7

Connecting Audio Components 8

Connecting DVD 7.1 Channel (5.1 for VSX-D710S)

Components 9

Connecting Video Components 10

Connecting Antennas 11

Connecting Speakers (VSX-D710S) 12

Connecting Speakers (VSX-D810S/D850S) 13

Hints on Speaker Placement 14

Connecting Additional Amplifiers (VSX-D810S/

D850S only) 15

AC Outlet [switched 100 W (0.8 A) max] 15

#### 04 Preparations 16

Setting Up for Surround Sound 16

Setting the Volume Level of Each Channel 21

#### 05 Displays & Controls 22

Front Panel 22

Display 23

Remote Control (VSX-D710S/D810S) 24

Remote Control (VSX-D850S) 26

LCD Display (VSX-D850S only) 26

#### 06 Sound Modes 27

Learning about the Sound Modes 27

Switching ANALOG/DIGITAL Signal Input 29

Playing Sources with Dolby Digital or

DTS Sound 29

Selecting a Sound Mode 30

Sorround operation 30

ADVANCED THEATER mode

(Dolby/DTS mode) 30

DVD 5.1 ch/7.1ch (5.1 ch for VSX-D710S) input

playback 31

MIDNIGHT Listening Mode 31

Playing other Source 31

#### 07 Using the Tuner 32

Finding a Station 32

Tuning Directly to a Station 32

Memorizing Stations 33

Recalling Memorized Stations 33

#### 08 Making a Recording 34

Making an Audio or a Video Recording 34

Record MONITOR 34

Making a Digital Recording 34

#### 09 Controlling the Rest of Your System 35

Recalling Preset Codes 35

Setting Up Using Preset Code Search (VSX-

D710S/D810S) 36

Setting Up Using Library Search (VSX-D850S)

36

Setting Up Using Brand Name Search (VSX-850

only) 37

Learning Mode: Programming Signals from other

Remote Controls 38

Erasing One of the Remote Control button

Settings 39

Clearing All the Remote Control Settings 39

Direct Function 39

Checking Preset Code 40

Operating other Pioneer Components 40

CD/MD/CD-R/VCR/DVD/LD/DVR Player/

Cassette Deck Controls 41

Cable TV/Satellite TV/TV/DTV Controls 42

Preset Code List 43

#### 10 Additional Information 50

Troubleshooting 50

Specifications 51

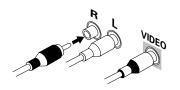
Before making or changing the connections, switch off the power and disconnect the power cord from the AC wall outlet.

### **Audio/Video Cords**

Use audio/video cords (not supplied) to make analog audio and video connections.

Connect red plugs to  $\mathbf{R}$  (right), white plugs to  $\mathbf{L}$  (left), and the yellow plugs to  $\mathbf{VIDEO}$ .

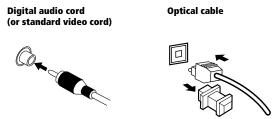
Be sure to insert completely.



## Digital Audio Cords/Optical Cables

Commercially available digital audio coaxial cords (standard video cords can also be used) or optical cables (not supplied) are used to connect digital components to this receiver.

When you use optical digital input or output terminals, pull off the caps and insert the plugs. Be sure to insert completely.



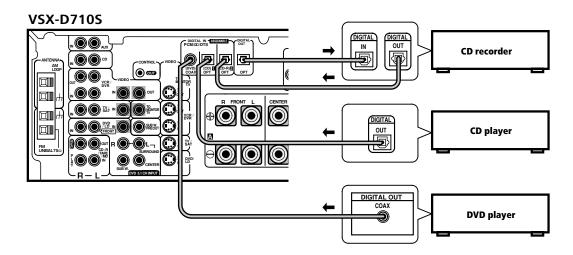
## **Connecting Digital Components**

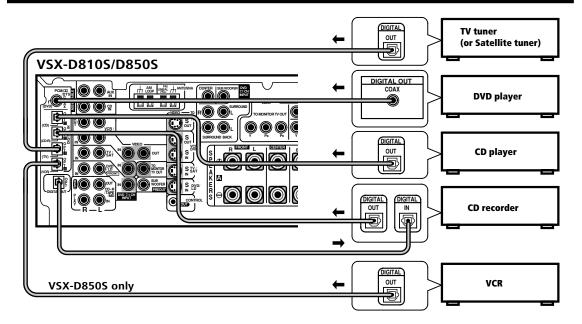
In order to use PCM/I Digital/DTS soundtracks, you need to make digital audio connections.

You can do this by either coaxial or optical connections (you do not need to do both). The quality of these two types of connections is the same but since some digital components only have one type of digital terminal, it is a matter of matching like with like (for example, the coaxial out from the component to coaxial in on the receiver). The VSX-D710S has a coaxial input and two optical inputs for a total of three digital inputs. The VSX-D810S has a coaxial input and three optical inputs for a total of four digital inputs and the VSX-D850S has a coaxial input and four optical inputs for a total of five digital inputs. Connect your digital components as shown below. There is one digital out jack which is marked **DIGITAL OUT**. If you connect this to the optical input on a digital recorder (currently these include MD, DAT and CD-R) you can make direct digital recordings with this unit.

When connecting your equipment, always make sure the power is turned off and the power cord is disconnected from the wall outlet.

The arrows indicate the direction of the audio signal.



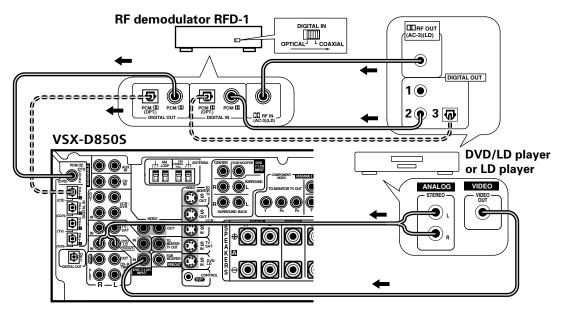


### **Example Connection for a DVD/LD or LD Player**

Since some LDs have soundtracks recorded on the special DD RF format you need to make special hook ups to ensure you can play all LDs on your system. If you don't have an LD (or an LD player with your DVD player) you don't need to worry about this. For the VSX-D710S/D810S/D850S hook up your DVD/LD or LD player directly and make sure you make both a DD RF output and either a coaxial or optical digital connection. Of course you must hook up your DVD/LD or LD player with standard (coaxial or optical) digital connections but if you are able to hook up your player with a DD RF output (if your player has one) this will ensure you can use all LDs available. We also recommend hooking up your digital components to analog audio jacks as well.

Before making or changing the connections, switch off the power and disconnect the power cord from the AC wall outlet. The diagram is for the VSX-D850S but hook up an RF Demodualtor to the VSX-D710S in the same manner.

The arrows indicate the direction of the audio signal.



#### MEMO:

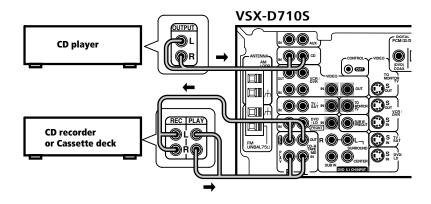
Be sure to make either a digital coaxial or digital optical connection as well, but you don't need to make both. Make sure the RF demodulator digital in switch is set correctly (optical or coaxial depending on the connection). See the component's instruction manual if you are unsure about its input and output jacks.

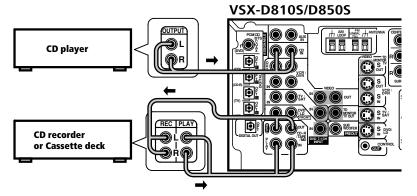
### **Connecting Audio Components**

To begin set up, connect your audio components to the jacks as shown below. These are all analog connections and your analog audio components (like a cassette deck) use these jacks. Remember that for components you want to record with you need to hook up four plugs (a set of stereo ins and a set of stereo outs), but for components that only play you only need to hook up one set of stereo plugs (two plugs). To use digital source features you must hook up your digital components to the digital inputs (see the previous page for more on digital connections) but it is also a good idea to hook up your digital components to these analog audio jacks. If you want to record to/from digital components (like an MD) to/from analog components, you must hook up your digital equipment with these analog connections.

When connecting your equipment, always make sure the power is turned off and the power cord is disconnected from the wall outlet.

#### The arrows indicate the direction of the audio signal.





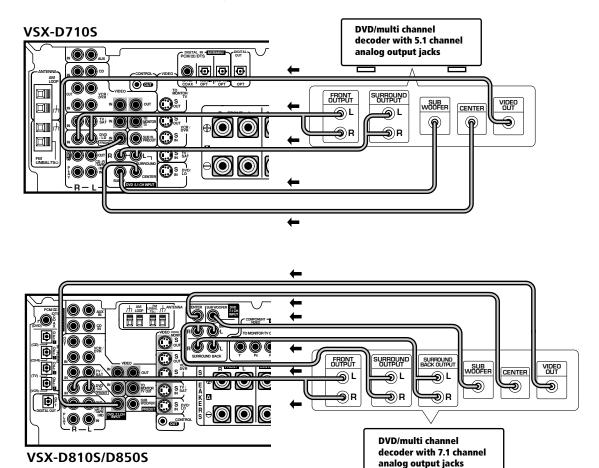
#### Cassette deck placement

Depending on where the cassette deck is placed, noise may occur during playback of your cassette deck which is caused by leakage flux from the transformer in the receiver. If you experience noise, move the cassette deck farther away from the receiver.

### Connecting DVD 7.1 Channel (5.1 ch for VSX-D710S) Components

DVD and LD discs are compatible with both 2 channel and 7.1 channel audio output formats. Connections can be made from a DVD player/multi-channel decoder equipped with 7.1 analog outputs to the 6.1 analog inputs on this unit (the surround back channel is mono on the VSX-D810S/D850S models so we refer to it as 6.1 ch). You need to connect both the left and right surround back channels for the VSX-D810S/D850S models but the sound from this channel will only be mono. Always make sure that the receiver is switched off and unplugged from the wall outlet before making or changing any connections.

The arrows indicate the direction of the audio signal.



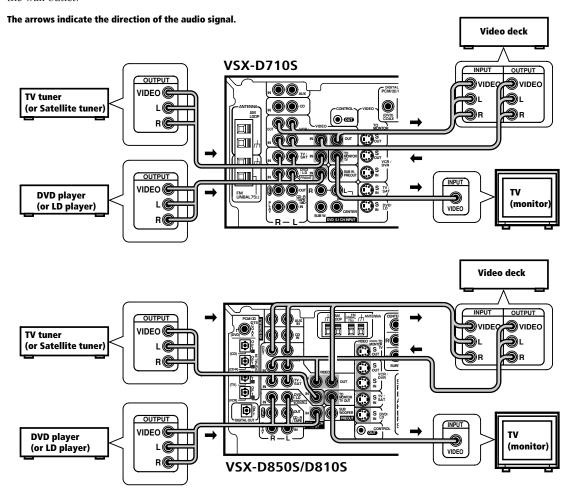
#### мемо:

- The 7.1 channel (5.1 channel for VSX-D710S) input can only be used when DVD 7.1 ch (5.1 channel for VSX-D710S) input is selected.
- For 6.1 channel output select the SB 1ch setting (see p. 20). In this case you can connect the single surround back speaker to either the left or right surround back terminals.

### **Connecting Video Components**

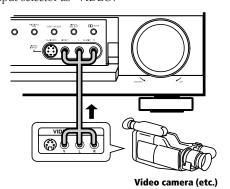
Connect your video components to the jacks as shown below. Regarding digital video components (like a DVD player), you must use the analog video connections pictured on this page for the video signal but in order to use a digital source (like a DVD) you must hook up their audio to a digital audio input (see p. 6-7). It is also a good idea to hook up your digital components with analog audio connections as well (see p. 8).

When connecting your equipment always make sure the power is turned off and the power cord is disconnected from the wall outlet.



#### **Front**

Front video connections are accessed via the front panel input selector as "VIDEO."



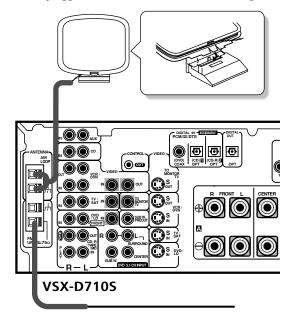
#### MEMO:

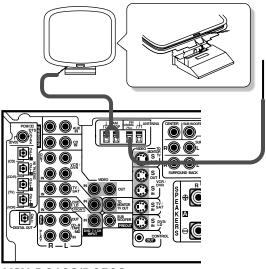
This receiver also has S-Video and component video inputs and outputs. These can give you a better picture than the standard composite video connections. For S-Video connections use an S-Video cord (not supplied); for component video connections use a three-way RCA cord (not supplied).

Note that a signal fed into a video input on this receiver is only sent to your TV from the corresponding video output. In other words, if you connect your VCR to this receiver using a standard video cord, you need to connect the receiver to your TV using a standard video cord. If your DVD player is connected using an S-Video cord, make sure that you also connect the receiver to your TV with an S-Video cord.

### **Connecting Antennas**

Connect the AM loop antenna and the FM wire antenna as shown below. To improve reception and sound quality, connect external antennas (see Using external antennas, below). Always make sure that the receiver is switched off and unplugged from the wall outlet before making or changing any connections.

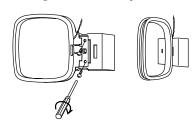




VSX-D810S/D850S

### AM loop antenna

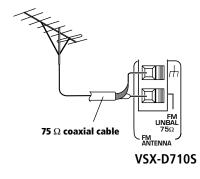
Assemble the antenna and connect to the receiver. Attach to a wall, etc. (if desired) and face in the direction that gives the best reception.



## **Using External Antennas**

### To improve FM reception

Connect an external FM antenna.

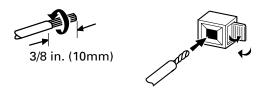


#### FM wire antenna

Connect the FM wire antenna and fully extend vertically along a window frame or other suitable area, etc.

### **Antenna snap connectors**

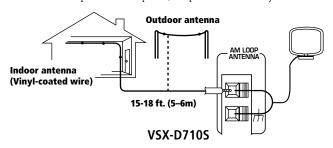
Twist the exposed wire strands together and insert into the hole, then snap the connector shut.



### To improve AM reception

Connect a 15-18 feet length of vinyl-coated wire to the AM antenna terminal without disconnecting the supplied AM loop antenna.

For the best possible reception, suspend horizontally outdoors.



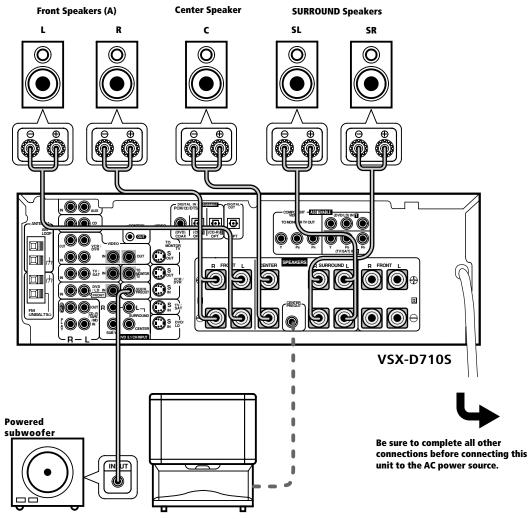
### **Connecting Speakers (VSX-D710S)**

A full complement of six speakers is shown here but, naturally, everyone's home setup will vary. Simply connect the speakers you have in the manner described below. The receiver will work with just two stereo speakers (called "front" speakers in the diagram) but we recommend you use at least three speakers and five is best.

Make sure you connect the speaker on the right to the right terminal and the speaker on the left to the left terminal. Also make sure the positive and negative (+/-) terminals on the receiver match those on the speakers.

#### MEMO:

- The receiver has two speaker systems, A & B. A is the main system supporting the full complement of surround sound speakers. If you switch on both A & B speaker systems, only front speakers and the subwoofer will be audible. No sound will come from the center or surround speakers but multi channel sources will be down-mixed to the active speakers so no sound will be lost. Similarly, if you choose just the B system you'll only hear the front speakers connected to the B system and multi channel sources will be down-mixed to these two speakers.
- Use speakers with a nominal impedance of 8  $\Omega$  to 16  $\Omega$ .



When using the speaker on your TV as the center speaker ('C'), connect the CENTER PREOUT jack on this unit to the audio input jack on your TV. In this case, the center speaker shown is unnecessary.

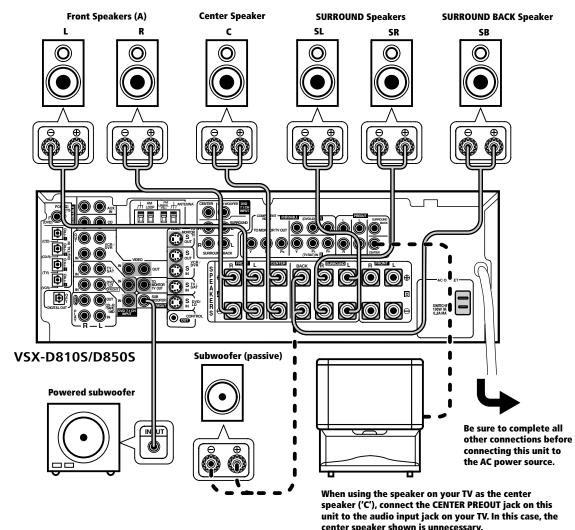
### **Connecting Speakers (VSX-D810S/D850S)**

A full complement of seven speakers is shown here but, naturally, everyone's home setup will vary. Simply connect the speakers you have in the manner described below. The receiver will work with just two stereo speakers (called "front" speakers in the diagram) but we recommend you use at least three speakers. To get the most out of the VSX-D810S/D850S models hook up all seven speakers, including a surround back speaker, the latest advancement in home theater. You can only hook up one speaker here as the surround back channel is mono on the VSX-D810S/D850S models. This is actually 6.1 ch sound but we usually refer to it by its regular name, 7.1 ch sound. The two are essentially the same thing both offering surround back sound. If you don't hook up a surround back speaker you can use that speaker terminal to hook up your subwoofer.

Make sure you connect the speaker on the right to the right terminal and the speaker on the left to the left terminal. Also make sure the positive and negative (+/-) terminals on the receiver match those on the speakers.

#### MEMO:

- The receiver has two speaker systems, A & B. A is the main system supporting the full complement of surround sound speakers. If you switch on both A & B speaker systems, only front speakers and the subwoofer will be audible. No sound will come from the center or surround speakers but multi channel sources will be down-mixed to the active speakers so no sound will be lost. Similarly, if you choose just the B system you'll only hear the front speakers connected to the B system and multi channel sources will be down-mixed to these two speakers.
- Use speakers with a nominal impedance of 8  $\Omega$  to 16  $\Omega$ .
- If you select subwoofer (SB SUBWF) in the surround back speakers setting mode (see p.17) you can hook a subwoofer up to the surround back speaker terminals. In this case the terminals will be used for this "passive subwoofer" and no surround back sound will come from these terminals.



### **Speaker terminals**

- 1 Twist exposed wire strands together.
- 2 Loosen speaker terminal and insert exposed wire.



3 Tighten terminal.

The speaker terminals also accept single banana plugs. (Refer to speaker manual for details.)





#### Caution:

Make sure that all the bare speaker wire is twisted together and inserted fully into the speaker terminal. If any of the bare speaker wire touches the back panel it may cause the power to cut off as a safety measure.

## **Hints on Speaker Placement**

Speakers are usually designed with a particular placement in mind. Some are designed to be floor standing, while others should be placed on stands to sound their best. Some should be placed near a wall; others should be placed away from walls. Follow the guidelines on placement that the speaker manufacturer provided with your particular speakers to get the most out of them.

- Place the front left and right speakers at equal distances from the TV.
- When placing speakers near the TV, we recommend using magnetically shielded speakers to prevent possible interference, such as discoloration of the picture when the TV is switched on. If you do not have magnetically shielded speakers and notice discoloration of the TV picture, move the speakers farther away from the TV.
- Install the center speaker above or below the TV so that the sound of the center channel is localized at the TV screen.

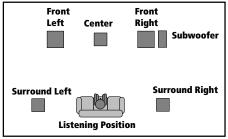
#### **CAUTION!**

If you choose to install the center speaker on top of the TV, be sure to secure it with putty, or by other suitable means, to reduce the risk of damage or injury resulting from the speaker falling from the TV in the event of external shocks such as earthquakes.

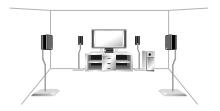
- If possible, install the surround speakers slightly above ear level.
- Try not to install the surround speakers farther away from the listening position than the front and center speakers. Doing so can weaken the surround sound effect.

To achieve the best possible surround sound, install your speakers as shown on the right. Be sure all speakers are installed securely to prevent accidents and improve sound quality.

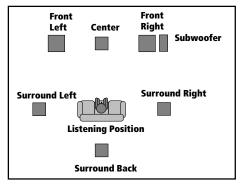
Overhead view of speaker set up ~VSX-D710S~



3-D view of speaker set up



Overhead view of speaker set up ~VSX-D810S/D850S~

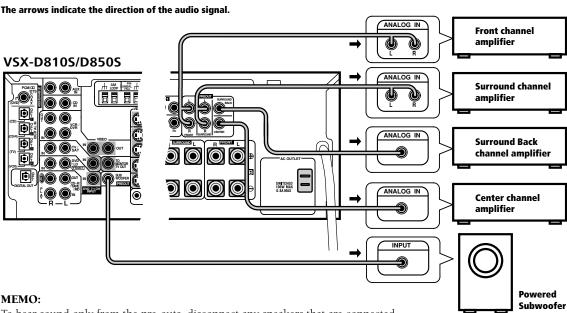


3-D view of speaker set up



## **Connecting Additional Amplifiers (VSX-D810S/D850S only)**

This receiver has more than sufficient power for any home use, however it is possible to add additional amplifiers to every channel. Make the connections shown below to add amplifiers to power your speakers. Always make sure that the receiver is switched off and unplugged from the wall outlet before making or changing any connections.



To hear sound only from the pre-outs, disconnect any speakers that are connected directly to the receiver. (Using the **SPEAKERS** button to switch off the speakers also mutes the pre-outs; you must set it to either A, B, or A+B.)

### AC Outlet [switched 100 W (0.8 A) max]

Power supplied through this outlet is turned on and off by the receiver's POWER switch

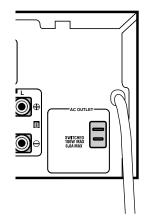
Total electrical power consumption of connected equipment should not exceed  $100~\mathrm{W}$  (0.8 A).

#### **CAUTION**

Do not connect a heater, TV, etc. Also, make sure no exposed speaker wire is touching the rear panel, this may cause the receiver to turn off automatically.

#### MEMO:

- This unit should be disconnected by removing the power plug from the wall socket when not in regular use, e.g., on vacation.
- Do not connect appliances with high power consumption such as heaters, irons, or television sets to this AC OUTLET in order to avoid overheating and fire risk. This can also cause the receiver to malfunction.



#### **CAUTION:**

DO NOT CONNECT A MONITOR OR TV SET TO THIS UNIT'S AC OUTLET.

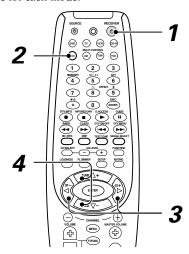
#### POWER-CORD CAUTION

Handle the power cord by the plug. Do not pull out the plug by tugging the cord and never touch the power cord when your hands are wet as this could cause a short circuit or electric shock. Do not place the unit, a piece of furniture, etc., on the power cord, or pinch the cord. Never make a knot in the cord or tie it with other cords. The power cords should be routed such that they are not likely to be stepped on. A damaged power cord can cause a fire or give you an electrical shock. Check the power cord once in a while. When you find it damaged, ask your nearest PIONEER authorized service center or your dealer for a replacement.

## **Setting Up for Surround Sound**

Be sure to switch the power of this unit on (The STANDBY indicator goes out).

To ensure the best possible surround sound, be sure to complete the following set up operations. This is particularly important when using the  $\square$  (Dolby)/DTS surround mode. You only need to make these settings once (unless you change the placement of your current speaker system or add new speakers, etc.). Refer to the following pages for detailed descriptions of the settings available for each mode.



1 Press **RECEIVER** to turn the power on.

The STANDBY indicator goes out.

#### 2 Press RCV.

This button switches the remote to the receiver's surround setup mode.

3 Press 

or 

to select the mode you want to set.

For best results, start with "SPEAKERS setting mode" and make your initial adjustments in the order described below.

The current settings are displayed automatically.

 DTS-ES ON/OFF setting mode (page 17) (VSX-D810S/D850S only)

Use to turn the DTS-ES (surround back) channels ON or OFF (for DTS discs only).

• SPEAKERS (Front, Center, Surround) setting mode (page 17)

Use to specify the size and type of speakers you have connected

 SPEAKERS (Surround Back) setting mode (page 17) (VSX-D810S/D850S only)

Use to specify the size and type of surround back speaker you have connected or if you have connected a subwoofer here.

- SUBWOOFER ON/PLUS/OFF setting mode (page 18) Use to specify if the subwoofer is set to on, plus or off.
- Crossover frequency setting mode (page 18)
   Use to determine which frequencies will be sent to the subwoofer (or "Large" speakers if you don't have a subwoofer).

- LFE attenuator setting mode (page 18)
   Use to specify the peak level for the LFE channel and the crossover network for rerouted bass frequencies.
- Low cut filter ON/OFF setting mode (page 18)
  Use to cut the distorted sound from the subwoofer.
- FRONT speakers distance setting mode (page 18)
  Use to specify the distance from your listening
  position to your front speaker.
- CENTER speakers distance setting mode (page 18)
   Use to specify the distance from your listening position to your center speaker.
- SURROUND speakers distance setting mode (page 19)

Use to specify the distance from your listening position to your surround speakers.

- SURROUND BACK speakers distance setting mode (VSX-D810S/D850S only) (page 19)
   Use to specify the distance from your listening position to your surround back speaker.
- Dynamic range control setting mode (page 19)
  Use to compress the dynamic range of the sound track.
- Dual mono setting mode (page 19)
  Use with DD Digital software that has dual mono encoding if you want to isolate one channel or listen in this specialized mono mode.
- Component input 1 setting (page 20)
   Use to specify the video component connected to this input.
- Component input 2 setting (page 20)
  Use to specify the video component connected to this input.
- Multi Channel External Decoder Surround Back 1ch/2ch setting (VSX-D810S/D850S only) (page 20) Use to specify whether you hooked up your External Multi Channel Decoder surround back speaker connection with one or two cords. If you're not using a External Multi Channel Decoder ignore this setting.
- Coaxial digital input setting (page 20)
   Use to specify the input to be assigned to the coaxial digital input.
- Optical digital input 1 setting (page 20)
   Use to specify the input assigned to this optical digital input.
- Optical digital input 2 setting (page 20)
   Use to specify the input assigned to this optical digital input.
- Optical digital input 3 setting (VSX-D810S/D850S only) (page 20)

Use to specify the input assigned to this optical digital input.

 Optical digital input 4 setting (VSX-D850S only) (page 21)

Use to specify the input assigned to this optical digital input.

4 Press △ or ▽ to select the setting you want.

The setting is entered automatically.

5 Repeat steps 3 and 4 to set other surround modes.

#### MEMO:

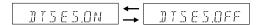
Press ENTER to exit the setting mode.

The setting mode is automatically exited if no operation is performed within 20 seconds.

## DTS-ES ON/OFF setting mode (VSX-D810S/D850S only)

This setting allows you to hear surround back channels on DTS disc regardless of whether the disc itself is a 5.1 Ch disc or a 6.1 Ch disc. Naturally you need to hook up surround back speakers (see p. 13) and set them properly (see below on this page) in order to hear surround back channels. If you choose ON you will hear surround back channels with DTS discs. If you choose OFF you will not.

## Choose DTS-ES ON or OFF by using the $\triangle$ or $\nabla$ buttons.



#### MEMO:

- If you choose none for the surround back speakers setting later on this page you won't be able to select ON here.
- You'll only get surround back channel sound when the receiver is in STANDARD mode (see p. 27-29), DTS-ES is set to ON and the disc is a DTS 5.1/6.1 channel disc.

## SPEAKERS (Front, Center, Surround) setting mode

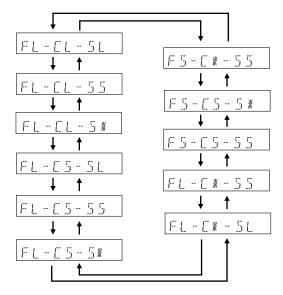
This setting establishes the size and configuration of the speaker system you have connected. So, for example, here you set whether you have connected surround speakers or not, and how big they are. Selecting "Large" or "Small" will determine how much bass is sent by the receiver to the speakers being set.

In the display, "**F**", "**C**", and "**S**" refer to front, center, and surround speakers respectively. Speaker size is denoted as "**L**" for large speakers, "**S**" for small speakers, and "\*" (asterisk) if no speaker is connected.

## Choose a speaker setting mode according to the speakers you hooked up. Use the $\triangle$ or $\nabla$ buttons.

The configurations shown below will appear in the display on the front of the receiver. One of them should match your speaker set up. Cycle through the different possibilities until you find the one that matches your set up.

Press ▷ to advance to the next receiver setting, and press square to return to a previous receiver setting.



#### MEMO:

If the cone size (diameter) of the speaker is larger than 5 inches, please set to Large.

## SPEAKERS (Surround Back) setting mode (VSX-D810S/D850S only)

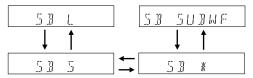
This setting establishes the size of the speaker connected to the surround back terminal (VSX-D810S/D850S only). You can choose a surround back speaker and its size or you can choose to hook a subwoofer to this terminal.

## Switch the surround back speaker setting mode according to the size of the speaker you hooked up. Use the $\triangle$ or $\nabla$ buttons.

The configurations shown below will appear in the display on the front of the receiver. Choose one. Cycle through the different possibilities until you find the one that matches your set up.

If you select SB SUBWF here you can hook a subwoofer up to the surround back speaker terminals (see p.13). In this case the terminals will be used for this "passive subwoofer" and no surround back sound will come from these terminals.

Press  $\triangleright$  to advance to the next receiver setting, and press  $\triangleleft$  to return to a previous receiver setting.



#### мемо:

- You can only set the surround back speaker to large if the surround speakers are set to small.
- If you choose none for surround speakers (see previous setup) you won't be able to select any surround back speakers either.
- If you choose A+B speaker systems no sound is heard from the "passive subwoofer".

## SUBWOOFER ON/PLUS/OFF setting mode

Sets whether the SUBWOOFER is used or not. Also, when used you have the option to use the "**PLUS**" setting.

Press  $\triangle$  or  $\nabla$  to select subwoofer ON, PLUS or OFE

#### MEMO:

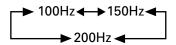
- The initial setting is "ON".
- Setting the front speaker size to "Small" in the SPEAKERS setting mode automatically locks the subwoofer in the "ON" position.
- Use the PLUS for extra bass. When you use PLUS
  you will get the bass sounds from the subwoofer
  even if the front speakers are set to "Large".
- If you select "OFF" in this setting you won't be able to select subwoofer in the surround back speaker setting above.

### **Crossover frequency setting mode**

Crossover frequency is the point where the receiver divides the high and low sounds (the frequencies) between the speakers. Since most smaller speakers can't handle deep bass tones, this setting allows you to send those sounds to the subwoofer (or speakers set to "Large" if you don't have a subwoofer) instead of the speakers set to "Small" in your system. Choose the point at which you want the frequency routed to the subwoofer (or "Large" speakers).

We recommend setting this to 200 Hz if smaller bookshelf-type speakers are used for your "Small" speakers.

Press  $\triangle$  or  $\nabla$  to specify the crossover frequency for your small speakers (100 Hz, 150 Hz or 200 Hz).



#### 100 Hz

Sends bass frequencies below 100 Hz to the subwoofer (or "Large" speakers).

#### 150 Hz

Sends bass frequencies below 150 Hz to the subwoofer (or "Large" speakers).

#### 200 Hz

Sends bass frequencies below 200 Hz to the subwoofer (or "Large" speakers).

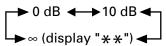
#### MEMO:

- The initial setting is "100 Hz".
- If all speakers (front, center, and surround) are set to "Large" in SPEAKERS setting mode, crossover frequency cannot be set because there are no "Small" speakers (\*\*\* appears in the display).

### LFE attenuator setting mode

Dolby Digital and DTS audio sources include ultra-low bass tones. Set the LFE attenuator as needed to prevent the ultra-low bass tones from distorting the sound from the speakers.

Press  $\triangle$  or  $\nabla$  to set the attenuation level (0 dB, 10 dB or \*\* dB( $\infty$ )).



#### MEMO:

- The initial setting is "0 dB".
- When ∞ is selected (\*\* appears in the display), LFE is not available.

### Low cut filter ON/OFF setting mode

Turn the low cut filter **ON** when distorted sound is output through the subwoofer.

Press  $\triangle$  or  $\nabla$  to select low cut filter ON or OFF.

#### MEMO:

- The initial setting is "OFF".
- If the SUBWOOFER is set to "OFF" in the SUBWOOFER ON/OFF setting mode, the low cut filter cannot be set.

### FRONT speakers distance setting mode

Sets the distance from the FRONT speakers to the listening position.

Press  $\triangle$  or  $\nabla$  to set the distance of the FRONT speakers from the main listening position (within a 30 foot range).

#### MEMO:

- The initial setting is 10 ft.
- One step equals about 1ft.

### **CENTER speaker distance setting mode**

Sets the distance from the CENTER speakers to the listening position.

Press  $\triangle$  or  $\nabla$  to set the distance of the CENTER speaker from the main listening position (within a 30 foot range).

#### мемо:

- The initial setting is 10 ft.
- When "C\*" is selected in SPEAKERS setting mode, the Center distance cannot be set.
- · One step equals about 1 ft.

## SURROUND speakers distance setting mode

Use to set the SURROUND speakers distance. Like the CENTER speaker position, the SURROUND speakers may be set in a location closer or farther to your main listening position than the FRONT speakers. Set the distance of the SURROUND speakers accurately to hear sounds coming from both FRONT and SURROUND speakers at the same time.

Press  $\triangle$  or  $\nabla$  to set the distance of the SURROUND speakers from the main listening position (within a 30 foot range).

#### MEMO:

- The initial setting is 10 ft.
- When "S\*" is selected in SPEAKERS setting mode, the SURROUND distance cannot be set.
- One step equals about 1 ft.

# SURROUND BACK speaker distance setting mode (VSX-D810S/D850S only)

Use to set the SURROUND back speaker distance. Like the SURROUND speakers, the SURROUND BACK speakers may be set in a location closer or farther to your main listening position than the FRONT speakers. Set the distance of the SURROUND speakers accurately to hear sounds coming from both FRONT and SURROUND speakers at the same time.

Press  $\triangle$  or  $\nabla$  to set the distance of the SURROUND speakers from the main listening position (within a 30 foot range).

#### MEMO:

- The initial setting is 10 ft.
- When "SB\*" is selected in SPEAKERS setting mode, the SURROUND BACK distance cannot be set.
- One step equals about 1 ft.

### **Dynamic range control setting mode**

Dynamic range is the difference between the loudest and softest sounds in any given signal. The dynamic range control helps you play back sounds so the quieter sounds are audible yet the louder sounds don't get distorted. It does this by compressing the dynamic range. When watching a movie at low volume, setting this function enables low level sounds to be heard more easily but you won't be jolted by louder sounds.

Press  $\triangle$  or  $\nabla$  to set the dynamic range control (OFF, MAX, or MID).

#### MEMO:

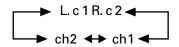
- The initial setting is "OFF".
- · When the volume level is increased, set to OFF.
- For listening enjoyment at low volumes, set to "MAX" for maximum dynamic range compression.
- Dynamic range control is effective only when a Dolby Digital signal is being played back.

### **Dual mono setting**

The dual mono setting can only be used when listening to Dolby Digital discs that have dual mono software encoded in them. As of now these are not that widely used. With this setting you can choose which channel in the dual mono setting you want to listen to. Thus, it is useful for soundtracks that have one language on one channel and a different language on the other. Remember you can only use this setting if you have Dolby Digital software with this feature and want to isolate one of the channels therein.

There are two different ways to route the sound in the dual mono setting, one is with Dolby Digital mode on, the other with Dolby Digital mode off. If Dolby Digital mode is switched on, the ch1 setting will play channel 1 through your center speaker. The ch2 setting will play channel 2 through your center speaker. With Dolby Digital mode off, the dual mono sound routing is as follows: In the **ch1** setting your will hear channel 1 out of both front speakers. In the **ch2** setting you will hear channel 2 out of both speakers. In the **L. c1 R. c2** setting the speakers will play the soundtrack independently of each other. The left front speaker will play channel 1 and the right front speaker will play channel 2.

Press  $\triangle$  or  $\nabla$  to cycle through the possible DUAL MONO settings.



#### **MEMO**

• The default setting of this feature is **ch1**.

### **Component input 1 setting**

Tells the receiver What (DVD player, etc.) is connected to this input.

Press  $\triangle$  or  $\nabla$  to select the component setting (DVD, TV, VCR or OFF).

#### MEMO:

• The initial setting is "DVD".

### **Component input 2 setting**

Tells the receiver What (TV, player etc.) is connected to this input.

Press  $\triangle$  or  $\nabla$  to select the component setting (TV, VCR, OFF or DVD).

#### MEMO:

• The initial setting is "TV".

### Multi Channel External Decoder Surround Back 1ch/2ch setting (VSX-D810S/VSX-D850S only)

You only need to make this setting if you are using a multi channel external decoder with your DVD player. If you aren't just ignore this setting.

Press  $\triangle$  or  $\nabla$  to select the channel setting. Select 1ch if your DVD is outputting 6.1 sound (the surround back channel is mono) or select 2ch if your DVD is outputting 7.1 sound (the surround back channel is stereo).

### **Coaxial digital input setting**

Here you tell the receiver what component you have hooked up to the coaxial digital input jack.

## Press $\triangle$ or $\nabla$ to select the coaxial digital input (DVD, TV, CD, CD-R, VCR, or OFF).

After you assign the component to this digital jack whenever you select that component, for example a CD player, the receiver will automatically change to the digital input setting. You can see this in the DIGITAL/ANALOG indicator on the front of the receiver.

#### MEMO:

The initial setting is "DVD".

### **Optical digital input 1 setting**

Here you tell the receiver what component you have hooked up to the optical input jack 1.

## Press $\triangle$ or $\nabla$ to select the optical digital input 1 (DVD, TV, CD, CD-R, VCR, or OFF).

After you assign a component to this digital jack whenever you select that component, for example a CD player, the receiver will automatically change to the digital input setting. You can see this in the DIGITAL/ANALOG indicator on the front of the receiver

#### MEMO:

• The initial setting is "CD".

### **Optical digital input 2 setting**

Here you tell the receiver what component you have hooked up to the optical input jack 2.

## Press $\triangle$ or $\nabla$ to select the optical digital input 2 (DVD, TV, CD, CD-R, VCR, or OFF).

After you assign a component to this digital jack whenever you select that component, for example a CD player, the receiver will automatically change to the digital input setting. You can see this in the DIGITAL/ANALOG indicator on the front of the receiver.

#### мемо:

• The initial setting is "CD-R".

## Optical digital input 3 setting (VSX-D810S/VSX-D850S only)

Here you tell the receiver what component you have hooked up to the optical input jack 3.

## Press $\triangle$ or $\nabla$ to select the optical digital input 2 (DVD, TV, CD, CD-R, VCR, or OFF).

After you assign a component to this digital jack, whenever you select that component, for example a CD player, the receiver will automatically change to the digital input setting. You can see this in the DIGITAL/ANALOG indicator on the front of the receiver.

#### MEMO:

• The initial setting is "TV".

## Optical digital input 4 setting (VSX-D850S only)

Here you tell the receiver what component you have hooked up to the optical input jack 4.

## Press $\triangle$ or $\nabla$ to select the optical digital input 2 (DVD, TV, CD, CD-R, VCR, or OFF).

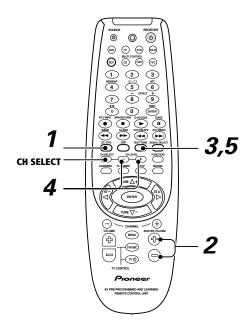
After you assign a component to this digital jack whenever you select that component, for example a CD player, the receiver will automatically change to the digital input setting. You can see this in the DIGITAL/ANALOG indicator on the front of the receiver.

#### MEMO:

- The initial setting is "VCR".
- The digital out signal corresponds to the selected input function (for example, DVD).

# Setting the Volume Level of Each Channel (adjusting the speaker volume balance)

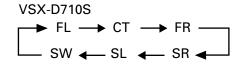
Use to set the relative volume of each channel.



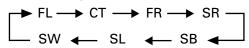
- 1 Press DD/DTS.
- 2 Press MASTER VOLUME + or to adjust the volume to an appropriate level.

#### 3 Press **TEST TONE** to output the test tone.

The test tone is output in the following order.



#### VSX-D810S/D850S

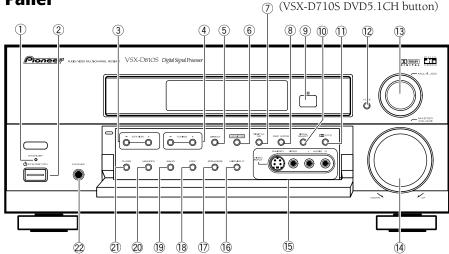


- Test tone is only output in Dolby/DTS modes. The test tone sequence corresponds to the speaker setting mode.
- 4 Adjust speaker levels so that you hear the test tone at the same volume from each speaker when seated in the main listening position.
- If a speaker is deselected in the speaker setting mode (see p. 17) then no test tone will be output for that speaker.
- The channel level range is  $\pm$  10 dB.
- · Levels can be set for each surround mode.
- 5 Press **TEST TONE** to turn off the test tone.

#### MEMO:

- Since the SUBWOOFER transmits an ultra-low frequency its sound may seem quieter than it actually is
- The speaker volume can be adjusted without outputting the test tone by pressing CH LEVEL or CH SELECT button.
- Initial setting is 0 dB.
- You can set each sound mode individually and these settings are completely independent of each other.
   The sound modes you can set include DSP, stereo, DVD 7.1 Ch and DD/DTS, as explained in steps above. However, you can only use the test tone feature when setting DD/DTS.

#### **Front Panel**



#### (1) STANDBY indicator

Lights when the receiver is in standby mode (note that the receiver consumes a small amount of power (1W) in standby mode).

#### ② O STANDBY/ON button

Switches the receiver between on and standby (note that the receiver consumes a small amount of power (1W) in standby mode).

- ③ STATION (+/-) buttons (see pages 32-33)
  Selects station memories when using the tuner.
- 4 TUNING (+/-) buttons (see pages 32-33) Selects the frequency when using the tuner.
- **5** DIRECT button

Use to switch DIRECT playback on or off. This mode bypasses the tone controls, channel levels, DID/DTS and DSP modes for the most accurate reproduction of a program source.

**6** MONITOR button

Press to switch tape monitoring on/off.

- ⑦ DIGITAL NR button (VSX-D810S/D850S) Switches the DIGITAL NR on or off . DVD5.1CH button (VSX-D710S) (see page 31) On the VSX-D810S/D850S use this button to switches the DIGITAL NR on or off. On the VSX-D710S this button switches between DVD5.1CH input and regular DVD input.
- ® DSP MODE button (see page 28, 30)
  Use to switch between the various DSP modes available (HALL1, HALL 2, JAZZ, DANCE, THEATER1, THEATER 2, 6CH STEREO [VSX-D810S/D850S only]) and DSP off. Use this button to create different surround sound effects from any stereo source.
- (9) Remote sensor

Receives the signals from the remote control.

- ① SIGNAL SELECT button (see page 29) Use to select an analog or digital or AUTO (VSX-D810S/D850S only) signal.
- ① DC /DTS button (see pages 27, 29)
  Use to switch between the various Dolby/DTS surround modes.

#### 12 TONE button

This button allows you to activate the BASS & TREBLE controls. To adjust the BASS and/or TREBLE use the MULTI JOG DIAL. Tone can only be used in 2 channel stereo sound mode. The tones controls have no effect on the B speaker system.

#### 13 MULTI JOG dial

You can use this dial for two purposes. Firstly, in normal mode turn it to select a source component. Secondly, use it to adjust the BASS and/or TREBLE levels when the TONE button has been activated (as explained above).

#### (14) MASTER VOLUME

Use to set the overall listening volume.

#### **15** VIDEO INPUT jacks

Connect a video camera, video game system, etc. to the **VIDEO INPUT** jacks (refer to page 10).

16 MIDNIGHT button (see page 31)

Use when listening to movie soundtracks at low volume. This feature will enable you to hear quiet sounds and not get jolted by loud or sudden sound effects.

#### (17) SPEAKERS button

Use to switch the speaker system  $A \rightarrow B \rightarrow A+B \rightarrow$  off. In **B** and **A+B** speaker modes you hear only 2 channel stereo sound.

(18) MPX button (see page 32)

If the **TUNED** or **STEREO** indicators don't light when tuning to an FM station because the signal is weak, press the MPX button to switch the receiver into mono reception mode. This should improve the sound quality and allow you to enjoy the broadcast.

- (19) BAND button (see page 32-33)
  - Press to select the AM or FM band.

② MEMORY button (see page 33)
Press to memorize a station for recall using the STATION (+/-) buttons.

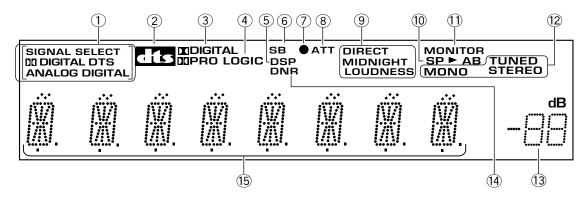
② CLASS button (see pages 33)

Switches between the three banks (classes) of station memories.

22 PHONES jack

Use to connect headphones but this does not switch the speakers off.

### **Display**



#### 1 SIGNAL SELECT indicators

Light to indicate the type of input signal assigned for the current component (see "Front Panel", (1) SIGNAL SELECT). When the AUTO setting is being used on VSX-D810S & VSX-D850S receivers a set of brackets will appear around the SIGNAL SELECT indicators.

**DIDDIGITAL**: Lights when a DOLBY DIGITAL signal is played.

**DTS**: Lights when a source with DTS audio signals is played.

**ANALOG**: Lights when an analog signal is selected. **DIGITAL**: Lights when a digital audio signal is selected. [ ]: Lights when the AUTO setting is selected. (VSX-D810S/D850S only)

#### 2 DTS indicator

Lights when DTS mode is being used.

#### 3 DD DIGITAL indicator

When the DD (DOLBY)/DTS mode of the receiver is on, this lights to indicate playback of a Dolby Digital signal. However, DD PRO LOGIC lights during DD channel playback of Dolby Digital.

#### 4 DD PRO LOGIC indicator

When the DD (DOLBY)/DTS mode of the receiver is on, this lights to indicate playback of a Dolby Pro Logic source.

#### **5** DSP indicator

Lights when any Advanced Theater or DSP mode is selected.

(i) Surround Back indicator (VSX-D810S/D850S only) Lights when most Surround Back channel flag encoded (6.1channel) software is playing. (With some Surround Back channel software the surround back indicator won't light because there is no flag encoded in the software.) If you play DTS 5.1/6.1 channel software surround sound will be heard whether it is encoded with a surround back channel flag or not.

#### (7) OVERLOAD indicator

This lights when an analog signal is too strong (the SIGNAL SELECT needs to be on ANALOG). It indicates the sound is distorting and the input signal should be reduced.

#### 8 ATT indicator

Lights when ATT is used to attenuate (reduce) the level of the input signal (can only be used in ANALOG mode).

#### 9 DIRECT indicator

Lights when source DIRECT is in use. This function bypasses all tone, channel levels, DSP and Dolby Surround effects.

#### MIDNIGHT indicator

Lights when MIDNIGHT listening mode is in use.

#### LOUDNESS indicator

Lights when the LOUDNESS is on. LOUDNESS is used to boost the bass and treble when listening at low levels.

#### **10 SPEAKER indicator**

Shows if the speaker system is on or not. SP ►A (and/or) B means speakers are switched on. SP ► means speakers are switched off.

#### 1 MONITOR indicator

Lights when MONITOR is selected to hear a recording as it's being made (see page 34).

#### 12 TUNER indicators

#### MONO:

Lights when the mono mode is set using the MPX MODE button.

#### **TUNED**

Lights when a broadcast is being received.

#### STEREO:

Lights when a stereo FM broadcast is being received in auto stereo mode.

#### **13 MASTER VOLUME LEVEL**

Shows the overall volume level. Volume level is maintained even when the power is off. ---dB indicates the minimum level, and 0dB indicates the maximum level.

• Depending on the level settings you make for individual channels, the MAX level can range between -10dB and 0dB.

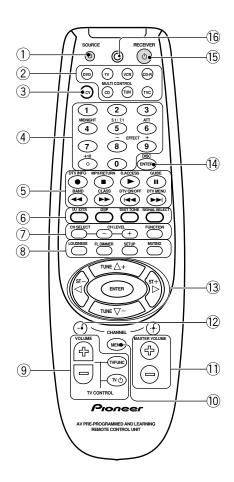
#### (4) DNR indicator (VSX-D810S/D850S only)

Lights when the digital noise reduction is on. Use to reduce extraneous noise. It can be used with any sound mode.

#### **(5)** CHARACTER display

Shows the radio frequency or function (DVD/LD, CD, etc.) receiver is using.

## Remote Control (VSX-D710S/D810S)



#### ① SOURCE <sup>()</sup> button

Use to turn on/off other components connected to the receiver.

#### 2 MULTI CONTROL buttons

Use to put the receiver/remote control in the stated mode.

For other equipment controls, see Controlling the Rest of Your System on pages 35-49.

#### 3 RCV button (see page 16)

Use this button when setting up the surround sound for the receiver. Also press it if you want to use special features attached to some of the number buttons, for example MIDNIGHT, 5.1/7.1, or ATT.

#### 4 NUMBER/MODE buttons

Use the number buttons to select the radio frequency in tuner DIRECT ACCESS (see page 32) mode or the tracks in CD, DVD mode etc.

Also, buttons marked with the following names have special functions. If you try to use one of these functions but the display flashes it means that function cannot be used in the current mode (for example DSP modes cannot be used when 5.1 Ch setting is on).

#### MIDNIGHT (see page 31)

Use to put receiver in MIDNIGHT mode. To use first press the  ${\it RCV}$  button then operate this button.

## **5.1 Ch (VSX-D710S) 7.1Ch (VSX-D810S/D850S)** (see page 31)

When the DVD/LD or DVD 5.1/7.1 Ch function is selected each press switches the DVD/LD input between DVD/LD and DVD 5.1/7.1 Ch. To use first press the **RCV** button then operate this button.

#### ATT

When the overload indicator lights use this button to attenuate (lower) the level of an analog input signal and prevent distortion. To use first press the **RCV** button then operate this button.

#### EFFECT +/- buttons (see page 30)

Use to add or subtract the amount of effect in different DSP sound modes (except 6 Ch Stereo) or advanced listening modes.

To use first press the  $\ensuremath{\mathbf{RCV}}$  button then operate these buttons.

⑤ THE FOLLOWING BUTTONS ARE BOTH CONTROLS FOR OTHER COMPONENTS (LIKE A DVD PLAYER) AND DEDICATED TUNER CONTROLS. THE TUNER CONTROLS ARE EXPLAINED HERE. YOU CAN USE THEM AFTER YOU HAVE PUSHED THE TUNER MULTI CONTROL BUTTON.

#### BAND button (see pages 32, 33)

Use to switch between the AM and FM band when in TUNER mode.

#### CLASS button (see pages 33)

Use to switch between the three banks (classes) of station memories.

#### MPX/RETURN button (see page 32)

Use to switch between auto stereo and mono reception of FM broadcasts. If the signal is weak then switching to MONO will improve the sound quality. Also, this is the pause button for CDs, tapes, DVDs, etc.

#### D. ACCESS button (see page 32)

Use to directly access a radio station by pressing the number of the station you want.

#### DTV INFO button

Use to bring up information screens on a digital TV.

#### DTV MENU button

Use to bring up menus on a digital TV.

#### DTV ON/OFF button

Use to turn a digital TV on/off.

#### **GUIDE** button

Use to bring up the guides on a digital TV.

#### 6 DI /DTS button (see pages 27, 29)

Use to put receiver in DOLBY DIGITAL, DOLBY SURROUND and DTS modes.

#### DSP button (see pages 28, 30)

Use to put receiver in one of the DSP modes.

#### TEST TONE button (see page 21)

Use to sound the TEST TONE when setting up the surround sound of the receiver (the DD /DTS mode must be on).

#### SIGNAL SELECT (see page 29)

Use to select the proper signal (analog, digital) for the source your are inputting. On the VSX-D810S & VSX-D850S receivers there is an AUTO setting. In this setting the receiver will automatically switch between the analog and digital signals according to what is being input. If both signals are input the AUTO setting will choose the digital one. This setting is convenient as the receiver will always choose the best or appropriate signal.

#### 7 CH SELECT button (see page 21)

Use to select a speaker when setting up the surround sound of the receiver. To use first press the **RCV** button then operate this button.

#### CH LEVEL +/- (see page 21)

Use to set up the levels of the surround sound of the receiver. To use first press the **RCV** button then operate this button.

#### **FUNCTION** button

Use to select the playback or recording source. This button lets you cycle through the different functions of the receiver in the following order: CD, TUNER, AUX, CDR/TAPE, VCR/DVR, DVD/LD, DVD 7.1 Ch, VIDEO, and TV/SAT (VSX-D810S/D850S). CD, TUNER, AUX, CDR/TAPE, VCR/DVR, DVD/LD, VIDEO, and TV/SAT (VSX-D710S).

#### (8) LOUDNESS button

Use to switch on the loudness. This feature is useful for getting good bass and treble sounds listening at low volumes.

#### FL DIMMER button

Use this button to make the fluorescent display (FL) dimmer or brighter. There are three brightness settings as well as an off setting.

#### SETUP button (see page 35-40)

Use this button when setting up the remote control to control other components.

#### MUTING button

Use to mute the sound or restore the sound if it has been muted.

#### THE FOLLOWING BUTTONS ARE DEDICATED TV CONTROL. THEY ARE ONLY USED FOR CONTROLLING YOUR TV.

#### TV FUNC button

Use select the TV function.

#### TV O button

Use to turn on/off the power of the TV.

#### TV VOLUME +/- buttons

Use to adjust the volume on your TV.

#### 10 MENU button

Use to access different menus associated with your DVD player.

#### ① MASTER VOLUME +/- buttons

Use to set the overall listening volume.

#### 12 CHANNEL +/- buttons

Use to select the stations of memorized radio frequencies. Also use to skip tracks backward or forward on CDs, DVDs, etc.

## $\ensuremath{ \textcircled{3}} \lhd \, \rhd \, \triangle \ \mbox{$\nabla$}$ ( TUNE/ST +/–) & ENTER buttons (see pages 16-21)

Use these arrow buttons when setting up your surround sound system (see pages 16-21). These buttons are also used to control DVD menus/options and for deck 1 of a double cassette deck player. The TUNE/ST +/— buttons can be used to find radio frequencies and preset stations, respectively.

#### 14 DISC (ENTER) button

Use to select a disc an in multi-CD player. To use first press the **RCV** button then operate this button.

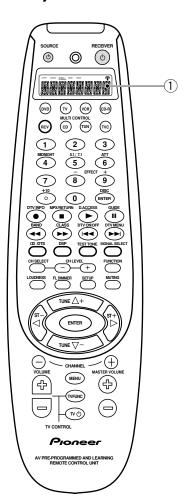
#### 15 RECEIVER ♥ (POWER) button

This switches between STANDBY mode and power ON for this receiver.

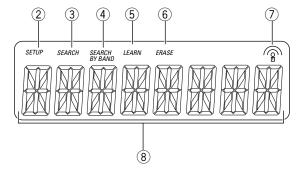
#### (16 LED DISPLAY (see pages 35-40)

This display flashes when a command is sent from the remote control to the receiver. It also flashes at other times, for example when teaching the receiver preset codes, with specific meanings.

## Remote Control (VSX-D850S)



## LCD Display (VSX-D850S only)



- 1 LCD display
- ② SETUP

Indicates that the remote is in Setup mode.

③ SEARCH Indicates that the remote is in preset code Search mode.

#### **4** SEARCH BY BRAND

Indicates that the remote is in preset code Search by brand mode.

#### **5** LEARN

Indicates that the remote is in Learning mode and ready to learn signals from other remote controllers.

**6** ERASE

Indicates that the remote is in Erase mode.

7 Transmit icon

Blinks to indicate the remote is transmitting control signals.

**® CHARACTER display** 

Shows preset codes and other information.

Sound Modes D6

### **Learning about the Sound Modes**

The sound modes are explained here.

There are two cinema modes: DI STANDARD, and ADVANCED THEATER. These are designed to be used with multi channel surround sound audio/visual sources (like DVDs and LDs). Intrinsic to home theater, these modes can deliver realistic and powerful surround sound that recreates the movie theater experience. You may need to experiment with them to see which settings suit your home system and personal tastes.

The DSP and STEREO modes are designed to be used with music sources but some DSP modes are also suited for film soundtracks. Again, try different settings with various soundtracks to see which you like.

#### □□ (STANDARD) mode

This mode is for pure decoding of Dolby Digital, DTS and Dolby Surround sources. No special effects are added. It is good for enjoying movies that have been recorded in Dolby Digital, DTS or Dolby Surround.

You can identify Dolby Digital software by the POTENT OF DATA OF LATE OF THE MARKS. Most Dolby Surround software is marked Deligible with the potential of the

#### ADVANCED THEATER modes

#### MUSICAL

Simulates the acoustic environment of a large concert hall and is suitable for music or musical sources marked [Modern subspace] ( MODE SUITALE) or MODE SUITALE) or MODE SUITALE ( MODE SUITALE SUITA

#### DRAMA

Simulates the relaxed environment of a classic medium size movie theater, and is suitable for watching dramas on sources marked DIGIOUNY SURROUND ACAD I G I T A L ) or FIGURE 1.

#### ACTION

Simulates the acoustic environment of a large modern movie theater. You can enjoy the power and dynamics of motion picture audio which is best used with action movies on sources marked property acts of the control of the power and dynamics of motion picture audio which is best used with action movies on sources marked property acts of the control of the control of the power and dynamics of motion picture audio which is best used with action movies on sources marked property acts of the control of

#### EXPANDED (VSX-D710S)

This mode is especially designed to give sound depth to stereo sources. The overall effect builds a dynamic and broad sound space, allowing two-channel (stereo) signals to faithfully imitate a five speaker sound. Use with Dolby Pro Logic for a stereo surround effect. You can also use with Dolby Digital sources for a wider stereo field than STANDARD mode.

#### 5/6-D THEATER (VSX-D810S/D850S)

This mode is especially designed to give sound depth to stereo sources. The overall effect builds a dynamic and broad sound space, allowing two-channel (stereo) signals to faithfully imitate a six speaker sound. The mode should be used in conjunction with Dolby Pro Logic for sources bearing the DODGOLEY SURROUND mark.

#### **Sound Modes**

#### **DSP** modes

The DSP (Digital Signal Processing) modes allow you to transform your living room into a variety of different sonic environments when playing standard (two-channel) stereo sources, Dolby Pro Logic sources, and Dolby Digital sources. DSP modes do not work when the speakers are off.

#### HALL 1

Simulates the acoustic environment of a large, wooden concert hall. Complex delay of reflected sounds coupled with reverberation effects create the dynamic and beautiful sound characteristics of an orchestra performing in a concert hall, making it suitable for classical music

#### HALL 2

Simulates the acoustic environment of a concert hall with stone walls. The rich reverberations and natural fullness of the sound create the auditory impression of being in a concert hall, also making it suitable for classical music.

#### **JAZZ**

Simulates the acoustic environment of a jazz club. Less delay on the reflected sounds emphasizes the sensation of hearing a live band.

#### DANCE

Simulates the acoustic environment and strong bass sound of a dance club. A short delay on the reflected sounds emulates the raw power of the dance music.

#### THEATER 1

Adjusts the delay of the reflected sound to simulate the acoustic environment of a medium sized movie theater.

#### THEATER 2

Simulates the acoustic environment of a theater while maintaining proper localization of each channel.

#### 5/6Ch STEREO (VSX-D810S/D850S)

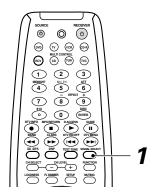
This mode reproduces stereo sound but uses all the speakers in the system to induce a rich, all-around sound.

#### MEMO:

• When using 96 kHz PCM playback, STANDARD, ADVANCED THEATER, and DSP sound modes are not available

## Switching ANALOG/DIGITAL Signal Input

When you select a function (for example CD) that is only hooked up by a digital connection, then the ANALOG/DIGITAL signal input switch will automatically choose digital for VSX-D810S/D850S. If you have that function hooked up by both digital and analog connections this switch lets you choose which to listen to.



1 Press **SIGNAL SELECT** to select the input signal corresponding to the source component.

Each press switches between ANALOG and DIGITAL signal selection (VSX-D710S).

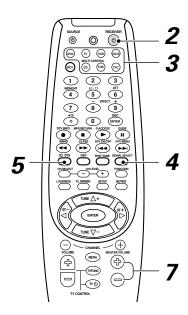
On the VSX-D810S & VSX-D850S receivers there is an AUTO setting. In this setting the receiver will automatically switch between the analog and digital signals according to what is being input. If both signals are input the AUTO setting will choose the digital one. This setting is convenient as the receiver will always choose the best or appropriate signal.

2 While **SIGNAL SELECT** is set to DIGITAL, DIGITAL lights when a Dolby Digital signal is input, DTS lights when a DTS signal is input.

#### MEMO:

- SIGNAL SELECT is fixed in the "ANALOG" position for components not assigned to one of the digital input jacks.
- This receiver can only play back Dolby Digital, PCM (32kHz, 44kHz, and 48kHz [VSX-D810S & VSX-D850S can play 96kHz]), and DTS, digital signal formats. With digital signal formats other than these, set SIGNAL SELECT to "ANALOG".
- Some DVD players don't output DTS signals. For more details, refer to the instruction manual supplied with your DVD player.

## Playing Sources with Dolby Digital or DTS Sound



- 1 Turn on the power of the playback component.
- 2 Turn on the power of the receiver.
  Be sure that the standby indicator turns off on the front panel.
- 3 Press MULTI CONTROL buttons or the FUNCTION button to select the source you want to playback.

If the DIRECT FUNCTION is OFF you have to use the **FUNCTION** button to select the source (see p.39).

- 4 Press SIGNAL SELECT to select DIGITAL.

  (Refer to "Switching ANALOG/DIGITAL signal input" on this page.)
- 5 Press DD/DTS to switch the Dolby/DTS mode on.
- 6 Start playback of the component you selected in step 1.
- 7 Press MASTER VOLUME (+/-) to adjust the volume level.

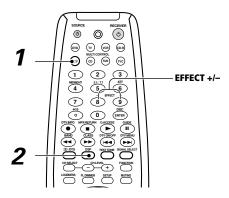
#### MEMO:

You can only hear the sound on DTS encoded discs if the CD or LD player with DTS is digitally connected to this receiver. If you play a DTS encoded disc through analog connections you will only hear digital noise, not the soundtrack. To prevent noise, you need to make digital connections (Refer to page 6-7) and set SIGNAL SELECT to "DIGITAL".

### **Selecting a Sound Mode**

To ensure the best possible surround sound, be sure to complete the set up procedures described in "Setting Up for Surround Sound" (starting on page 16) before using the sound modes. This is particularly important when using the DII (Dolby) surround mode.

### **Surround operation**

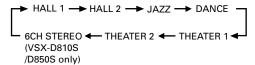


#### 1 Press RCV.

This sets the remote to select the sound mode. (You can skip this step when using the controls on the receiver.)

2 Press **DSP MODE** to select the sound mode.

Each press changes the DSP mode as follows:



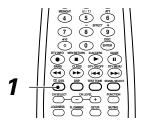
#### мемо:

- The amount of effect of each DSP mode can be adjusted in the range of 10 to 90 (the default setting value is 70) by pressing EFFECT +/-.
- The DSP effects can't be heard in 6 channel stereo (VSX-D810S/D850S only).
- For VSX-D810S/VSX-D850S receivers, when the surround back channel is set to off 6 channel stereo becomes 5 channel stereo.

## ADVANCED THEATER mode ( Dolby/ DTS mode)

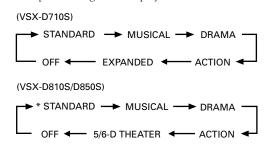
Switch on the Dolby/DTS mode by pressing the DD/DTS button. When Dolby/DTS mode is ON, Dolby Pro Logic, Dolby Digital and DTS, and signal processing is performed automatically corresponding to the input signal. Use this button to cycle through the various modes.

When the STANDARD mode is selected, DSP modes are off.



1 Switch the Dolby/DTS mode on and off by pressing DD/DTS on the remote control or DD/DTS on the front panel.

Each press changes the display as follows.



\*When using DTS 5.1/6.1 ch discs in STANDARD mode the display will change to "DTS-ES". Naturally the playback will still be 6.1 output.(VSX-D810S/D850S)

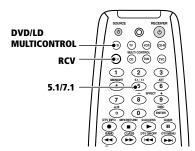
Refer to page 27 for more details about each surround effect.

#### MEMO:

- The effects of Dolby/DTS mode can be adjusted in the range of 10 to 90 by pressing EFFECT +/- (the default setting is 70). Also, the effect level can be set in each ADVANCED THEATER mode by pressing the EFFECT +/- button. The STANDARD mode cannot be changed.
- For the VSX-D810S/VSX-D850S, when the surround back channel is set to off in the speakers settings, 6-D Theater becomes 5-D Theater.

## DVD 5.1 ch./7.1 ch (5.1 ch for VSX-D710S) input playback

If you want you can connect a component with 7.1 channel (5.1 channel for VSX-D710S) analog output to enjoy surround sound playback. In this case the surround sound will be externally decoded and then fed into the receiver.



To switch on DVD 7.1 ch (5.1 ch for VSX-D710S) mode press the DVD/LD MULTI CONTROL button on the remote, then RCV, then 5.1/7.1 button.

VSX-D710S only: On the main unit press the DVD 5.1CH button to switch on 5.1 ch mode.

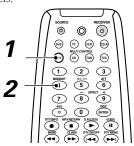
Press the 5.1/7.1 button on the remote to go back to the DVD/LD mode. If you're using the main unit, choose any other function with the MULTI JOG.

#### MEMO:

- When 5.1 ch/7.1 ch input is selected, Dolby mode, DSP mode, SIGNAL SELECT, ATT, DIRECT, TONE, MIDNIGHT mode, LOUDNESS and speakers B cannot be operated.
- When 5.1 ch/7.1 ch input is selected, only the volume level and channel levels can be set.

## **MIDNIGHT Listening Mode**

When listening at low volume, surround effects tend to become less than satisfactory. Turn the MIDNIGHT listening mode on to enjoy the effects of quality surround sound even at low volumes. This mode allows you to hear effective surround sound of movies at low volume levels.



#### 1 Press RCV.

This sets the remote to select the sound mode. (You can skip this step when using the controls on the receiver.)

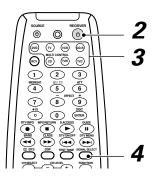
#### 2 Press MIDNIGHT.

Each press switches MIDNIGHT listening mode on or off.

#### MEMO:

• The effect automatically adjusts according to the volume level.

### **Playing other Sources**



- 1 Turn on the power of the playback component.
- 2 Turn on the power of the receiver.

Be sure that the standby indicator turns off on the front panel.

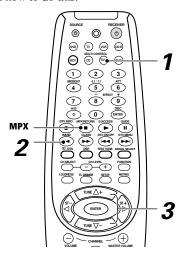
3 Press MULTI CONTROL buttons or the FUNCTION button to select the source you want to playback.

If the DIRECT FUNCTION is OFF you have to use the FUNCTION button to select the source (see p.39).

- 4 If necessary, press **SIGNAL SELECT** to select the input signal corresponding to the source component (see p.29).
- 5 Start playback of the component you selected in step 1.

## **Finding a Station**

The following steps show you how to tune in to FM and AM radio broadcasts using the automatic (search) and manual (step) tuning functions. If you already know the exact frequency of the station you want to listen to, see Tuning Directly to a Station on this page. Once you are tuned to a station you can memorize the frequency for recall later—see Memorizing Stations on page 33 for more on how to do this.



#### Press the MULTI CONTROL TUN button on the remote control.

On the receiver, use the **MULTI JOG** to select the tuner mode.

## 2 Use the **BAND** button to change the band (FM or AM), if necessary.

Each press switches the band between FM and AM On the receiver, pressing the **BAND** button switches between bands.

#### 3 Tune to a station.

#### Automatic tuning

To search for stations in the currently selected band, press and hold either the **TUNE +** or **TUNE –** button for about a second. The receiver will start searching for the next station, stopping when it has found one. Repeat this step to search for other stations.

#### Manual tuning

To change the frequency one step at a time, press the **TUNE +** or **TUNE –**  $(\triangle \nabla)$  buttons.

#### High speed tuning

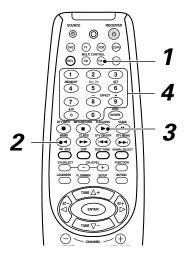
Press and hold the **TUNE +** or **TUNE –** button for high speed tuning, releasing the button once the desired frequency is reached.

#### **MPX** mode

If the **TUNED** or **STEREO** indicators don't light when tuning to an FM station because the signal is weak, press the **MPX** button to switch the receiver into mono reception mode. This should improve the sound quality and allow you to enjoy the broadcast.

## **Tuning Directly to a Station**

Sometimes, you'll already know the frequency of the station you want to listen to. In this case, you can simply enter the frequency directly using the number buttons on the remote control (this function is not available using the front panel controls of the receiver).



#### Press the MULTI CONTROL TUN button on the remote control.

On the receiver, use the **MULTI JOG** to select the tuner mode

## 2 Press the BAND button to select either FM or AM.

Each press switches the band between FM and AM. On the receiver, pressing the **BAND** button switches between bands.

#### 3 Press D.ACCESS (DIRECT ACCESS).

## 4 Use the number buttons to enter the frequency of the radio station.

Example: To tune to 106.00 (FM), press  $\mathbf{1} - \mathbf{0} - \mathbf{6} - \mathbf{0} - \mathbf{0}$ 

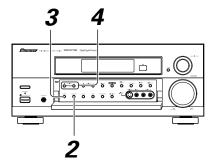


#### MEMO:

 If you make a mistake while inputting the frequency, press the **D.ACCESS** button twice to cancel the frequency and start again.

## **Memorizing Stations**

If you often listen to a particular radio station, it's convenient to have the receiver store the frequency for easy recall whenever you want to listen to that station. This saves the effort of manually tuning in each time. The VSX-D710S/D810S/D850S can memorize up to 30 stations, stored in three banks, or classes, (A,B and C) of 10 stations each. When memorizing FM frequencies, the receiver also stores the MPX setting (auto stereo or mono, see p.32). The process for memorizing stations is only possible from the controls on the front panel of the receiver.



1 Tune to a station you want to memorize.

See Finding a Station and Tuning Directly to a Station, on pages 32 and this page, for more on how to do this.

#### 2 Press MEMORY.

The display shows a blinking memory class.



3 Press **CLASS** to select one of the three classes.

Repeatedly pressing this button cycles through the three available classes, A, B and C.

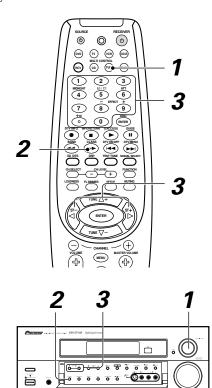
4 Press **STATION** +/- to select the desired station memory number.

Pressing these buttons repeatedly cycles through the 10 available station memories in each class. After choosing the location you want, the preset class and number blink for about 5 seconds and the receiver stores the station.

Repeat steps 1 to 4 to memorize up to 30 stations.

### **Recalling Memorized Stations**

Having memorized up to 30 stations (see the previous explanation for how to do this), preset stations can be easily recalled.



1 Press the MULTI CONTROL TUN button on the remote control.

On the receiver, use the  ${f MULTIJOG}$  to select the tuner mode.

2 Press **CLASS** to select the class in which the station is stored.

Repeatedly pressing this button cycles through the three available classes, A, B and C.

3 Use the **ST** +/- buttons to select the station memory in which the station is stored.

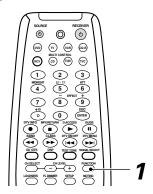
Alternatively, recall the station memory using the number buttons on the remote control.

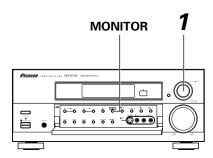
#### MEMO:

 If the receiver is left disconnected from the AC power outlet for a lengthy period, the station memories will be lost and will have to be reprogrammed.

## Making an Audio or a Video Recording

The following steps show you how to make an audio or a video recording from the built in tuner, or from an audio or video source connected to the receiver (such as a CD player or TV). Recordings can be made to a CD-Recorder, cassette deck, MD, VCR, or DVR deck connected to the CD-R/TAPE/MD, VCR or DVR in/out connectors.





1 Turn the MULTI JOG dial to select a source to record (you can also use the MULTI CONTROL buttons if the DIRECT FUNCTION is on).

All functions except MONITOR are accessible from the remote control.

2 Prepare the program source.

Tune to the radio station, load the CD, etc. For a video recording load the video, DVD etc.

3 Insert a blank tape, MD, video etc. into the recording device connected to either CD-R/ MD/TAPE or VCR/DVR and set the recording levels.

Refer to the instructions that came with the recorder if you are unsure how to do this. Most video recorders set the audio recording level automatically—check your video's instruction manual if you are unsure whether yours has manual controls.

4 Start recording, then start playback of the source component.

#### MEMO:

The receiver's volume, tone control (bass & treble) loudness, and surround effects have no effect on the recorded signal.

#### **Record MONITOR**

You can listen to (monitor) the recording as it's being made using the **MONITOR** button on the front panel (a cassette deck would have to have a record monitor function).

Press the **MONITOR** button to switch between the recorded signal and the original source signal.

## **Making a Digital Recording**

The VSX-D710S has one optical digital output jack. The VSX-D810S/D850S has one coaxial digital output jack and one optical digital output jack. The quality of these two types of connections is the same so you only need to match the type of connection on this receiver with the type of connection on your component. If you want to make a digital recording from this receiver hook up the optical output on this receiver to the optical input on the digital component you want to record into. The source component (like MD, CD, DVD, etc.) must be digital also, of course, and hooked up to this receiver in a digital manner. Make sure the analog/digital switch is set to digital (see p. 29) The recording procedure is the same as described above.

Refer to the table below for the type of digital connections available in each receiver model.

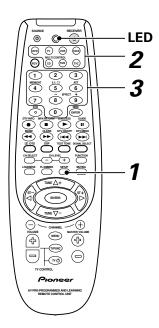
MODEL	COAX IN	OPT IN	OPT OUT
VSX-D710S	1	2	1
VSX-D810S	1	3	1
VSX-D850S	1	4	1

### **Recalling Preset Codes**

The following steps show you how to recall preset codes for each MULTI CONTROL button. Once the preset code is assigned, pressing the button will automatically set the remote to operate the respective component.

#### MEMO:

- Refer to "Preset Code List" on pages 43 to 49 for the components and manufacturers available.
- Refer to "Controlling the Rest of Your System" on pages 35 to 49 for detailed explanations on how to operate your other components.



1 Press SETUP and hold for three seconds to select the Preset mode.

The LED lights steadily for two seconds. (VSX-D850S only: The LCD display shows SETUP.)

To cancel the preset mode at any time

The remote control will also return to the previous mode after thirty seconds of inactivity.

2 Press the MULTI CONTROL button for the component you want to control.

Each button can be set to control one of the following components

DVD DVD/LD player or DVD Recorder
TV TV, Satellite tuner or Cable TV tuner
VCR VCR or Digital Video Recorder

**CD** CD player

Press SETUP.

**CD-R** CD Recorder, Tape deck

or MD player TV or Cable TV tuner

TVC TV or Cable TV to TUN FM/ AM tuner

## 3 Use the number buttons to enter the 4 digit setup code. (see pages 43-49 for Preset Code List)

The LED will blink for half a second after each digit is input and will show a long, two second blink to confirm a valid code has been input. (VSX-D850S only: The code appears in the LCD display as you input it. The display shows OK if it's a valid code.) If the LED blinks three times it means an invalid code has been input or an error has occurred. Check the preset code list and try again. If you are not able to input a preset code you can refer to page 38 to teach the remote control individual commands. The remote control returns to the previous operation mode. It will also return to the previous mode after thirty seconds of inactivity.

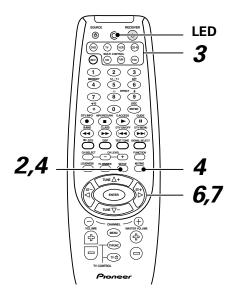
4 Repeat steps 1 through 3 to assign preset codes for as many components as necessary.

#### MEMO:

- You can only input a code for the component type written on each MULTI CONTROL button.
- If you recall a preset code for the tuner (TUN MULTI CONTROL), you will not be able to control the builtin tuner of this receiver using the remote. To reset the remote to the built-in tuner, input the preset code 7008
- To erase the preset code for the current MULTI CONTROL button, enter 0000 as the code in step 3.

## Setting Up Using Preset Code Search (VSX-D710S/D810S)

An alternative method of setting up the remote with preset codes is to use the search feature. The remote transmits batches of 10 codes; when you see the component responding you just scan through those last 10 codes until you find the correct one.



## 1 Switch on the component you want to control.

If the component is some kind of player (CD player, VCR, etc.), then start it playing.

#### 2 Press and hold SETUP for three seconds.

The LED lights steadily for two seconds. The remote control will also return to the previous mode after thirty seconds of inactivity.

## 3 Press the MULTI CONTROL button for the component you want to control.

Each button can be set to control one of the following components

DVD DVD/LD player or DVD Recorder
TV TV, Satellite tuner or Cable TV tuner
VCR VCR or Digital Video Recorder

**CD** CD player

**CD-R** CD Recorder, Tape deck

or MD player

TVC TV or Cable TV tuner
TUN FM/ AM tuner

#### 4 Press and hold SETUP for two seconds.

A batch of 10 codes is transmitted and the LED blinks during transmission. If you see the component respond, by stopping (for playback components only) or switching off, go on to the step 5, otherwise repeat this step.

If you want to cancel the search mode, press and hold MUTING for two seconds.

- 5 Switch the component back on or restart playback.
- 6 Use the △ ▽ buttons to scan through the last 10 codes transmitted to identify the correct code.

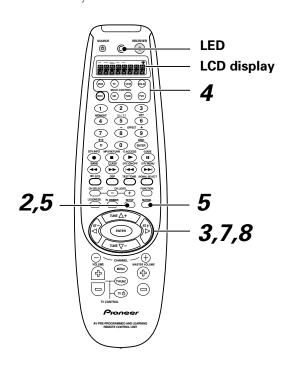
The LED will blink during transmission of the code. Stop when you see the component stop or switch off. You can also verify you have the correct code by pressing PLAY, STOP., VOL +/-, etc.

## 7 Press and hold ENTER for three seconds to save the preset code.

The remote control automatically returns to normal usuage.

## Setting Up Using Full Library Search (VSX-D850S)

An alternative method of setting up the remote with preset codes is to use the Library Search feature. The remote transmits batches of 10 codes; when you see the component responding you just scan through those last 10 codes until you find the correct one.



## 1 Switch on the component you want to control.

If the component is some kind of player (CD player, VCR, etc.), then start it playing.

#### 2 Press and hold SETUP for three seconds.

The remote's LCD display shows SETUP. The remote control will also return to the previous mode after thirty seconds of inactivity.

# 3 Use the ⊲ ▷ buttons to select the Full Library Search mode.

The remote's LCD display shows SEARCH.

4 Press the MULTI CONTROL button for the component you want to control.

Each button can be set to control one of the following components

DVD DVD/LD player or DVD Recorder
TV TV, Satellite tuner or Cable TV tuner
VCR VCR or Digital Video Recorder

**CD** CD player

TVC

TUN

**CD-R** CD Recorder, Tape deck

or MD player TV or Cable TV tuner FM/ AM tuner

5 Press and hold SETUP for two seconds.

A batch of 10 codes is transmitted and the LED blinks during transmission.

If you see the component respond, by stopping (for playback components only) or switching off, go on to the step 6, otherwise repeat this step. After the ten codes have been sent the search icon blinks. If you want to cancel the search mode, press and hold MUTING for two seconds.

- 6 Switch the component back on or restart playback.
- 7 Use the △ ▽ buttons to scan through the last 10 codes transmitted to identify the correct code.

The transmission icon is on while the codes are sent out. Stop when you see the component stop or switch off. The LCD display shows the I.D. You can also verify you have the correct code by pressing PLAY, STOP., VOL +/-, etc.

8 Press and hold ENTER for three seconds to save the preset code.

# Setting Up Using Brand Name Search (VSX-D850S only)

An alternative method of setting up the remote with preset codes is to use the Brand Search feature. The remote transmits batches of 10 codes; when you see the component responding you just scan through those last 10 codes until you find the correct one.

1 Switch on the component you want to control.

If the component is some kind of player (CD player, VCR, etc.), then start it playing.

#### 2 Press and hold SETUP for three seconds.

The remote's LCD display shows SETUP. The remote control will also return to the previous mode after thirty seconds of inactivity.

# 3 Use the ⊲ ▷ buttons to select the Brand Search mode, then press ENTER.

The remote's LCD display shows BRAND SEARCH.

# 4 Press the MULTI CONTROL button for the component you want to control.

Each button can be set to control one of the following components

DVD DVD/LD player or DVD Recorder
TV TV, Satellite tuner or Cable TV tuner
VCR VCR or Digital Video Recorder

**CD** CD player

**CD-R** CD Recorder, Tape deck

or MD player **TVC** TV or Cable TV tuner **TUN** FM/ AM tuner

# 5 Use the △ ∇ buttons to select the brand of the component.

The brand names appear in the remote's LCD display. If the brand of your component doesn't appear then you can't use this feature.

#### 6 Press and hold SETUP for two seconds.

A batch of 10 codes is transmitted and the transmission icon is on while the codes are sent out. After all ten codes have been sent the search icon blinks. If you see the component respond, by stopping (for playback components only) or switching off, go on to the step 6, otherwise repeat this step. If you want to cancel the search mode, press and hold MUTING for two seconds.

# 7 Switch the component back on or restart playback.

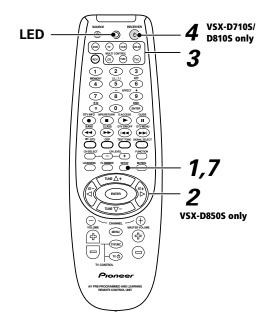
# 8 Use the △ ▽ buttons to scan through the last 10 codes transmitted to identify the correct code.

The transmission icon is on while the codes are sent out. Stop when you see the component stop or switch off. The display shows the I.D. You can also verify you have the correct code by pressing PLAY, STOP, VOL +/-, etc.

9 Press and hold ENTER for three seconds to save the preset code.

## Learning Mode: Programming Signals from other Remote Controls

If preset codes are not available for your component(s), or the available preset codes do not operate correctly, you can use this function to program in signals from the remote control(s) of your other component(s). This operation can also be used after recalling a preset code to program additional operations not covered in the preset codes.



#### 1 Press SETUP and hold for three seconds.

The LED on the remote control will light for two seconds.

To cancel the Learning mode at any time Press **SETUP**.

The remote control will also return to the previous mode after thirty seconds of inactivity.

2 VSX-D850S only: Use the ⊲ ▷ buttons to select the Learning mode.

The Learning mode is indicated by the Learning icon (LEARN) in the remote's LCD display.

- 3 Press the MULTI CONTROL button for the component you want to control
- 4 VSX-D710S/D810S: Press and hold the RECEIVER ⊕ button for two seconds to start the Learning mode.

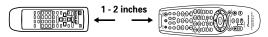
The LED lights steadily.

To cancel LEARNING setup mode

Press **SETUP** for one second.

If no commands are entered within thirty seconds the remote will revert to its previous mode.

5 Point the two remote controls towards each other. Press the button to be learned on this receiver's remote control (for example the ► [play] button).



Point the remote controls directly at each other, about 1-2 inches apart, and press the button on the remote control for the operation you want to program. The LED flashes rapidly. For VSX-D850S, the LEARN icon blinking.

6 Press the corresponding button on the other remote control to be taught to this receiver's remote control (in the above example the ▶ [play] button).

Point the remote controls toward each other. Press the button on the other remote control corresponding to the operation you wish to program. The LED on this receiver's remote will go out and then resume a steady light if the operation is learned. (For VSX-D850S model the LEARN icon will light steadily and the LCD display will show "OK" if the operation has been learned.) If the operation hasn't been learned for some reason the LED will blink for three seconds and then light steadily. (For VSX-D850S model the LCD will display "error" if the operation hasn't been learned.) If this happens press the teaching key repeatedly, varying the distances between the remotes, until you see the LED on this unit's remote light steadily, without blinking first.

# To program additional operations for the current component

Repeat steps 5 and 6.

To program operations for another component Repeat steps 2 through 6 (VSX-D850S). Repeat steps 3 through 6 (VSX-D710S/D810S).

7 Press and hold SETUP for one second to exit the LEARNING setup mode.

After thirty seconds of inactivity the remote control will automatically leave the LEARNING mode and revert to its previous mode.

#### MEMO:

- Some commands from other remote controls cannot be learned, but in most cases the remotes just need to be moved closer together or farther apart.
- Certain buttons represent modes that cannot be learned from other remote controls. These include: RCV, CH SELECT, CH LEVEL, FUNCTION LOUDNESS, FL DIMMER, and MUTING.
- TV CONTROL buttons (TV ♥, VOL +/-, and TV FUNC) can only be learned in TV & TVC mode.

# **Erasing One of the Remote Control Button Settings**

This erases one of the buttons you have programmed and restores the factory installed preset to that button.

VSX-D710S/D810S:

1 Press SETUP and hold for three seconds.

The LED on the remote control will light for two seconds

2 Press the MULTI CONTROL button relating to the function of the button to be cleared.

The remote control will return to the previous mode after thirty seconds of inactivity.

3 Press the RECEIVER © button twice within three seconds to start erase mode.

The LED blinks.

4 Press the button to be cleared for three seconds.

The LED lights steadily for three seconds and then goes off.

- 5 Repeat steps 4 to erase other codes.
- 6 Press and hold the SETUP button for one second to exit the erase mode.

VSX-D850S:

1 Press SETUP and hold for three seconds.

The LED on the remote control will light for two seconds and the display shows SETUP.

- 2 Use the ⊲ ▷ buttons to select the Erase mode.
  The LCD display shows ERASE.
- 3 Press the MULTI CONTROL button relating to the function of the button to be cleared.
- 4 Press the button you want to clear.
- 5 Repeat steps 3-4 to erase other codes.

# Clearing All the Remote Control Settings

Clears all presets, all learned functions and restores the factory presets.

1 Press SETUP and hold for three seconds.

For the VSX-D710S and VSX-D810S the LED on the remote control lights for two seconds. For the VSX-D850S the SETUP icon lights.

If you want to cancel the Clearing mode, press **SETUP** 

The remote control will also return to the previous mode after thirty seconds of inactivity.

2 Use the number buttons to enter 0123.

The LED light for half a second for each digit input. On the VSX-D710S and VSX-D810S the LED lights for two seconds to indicate that the setings have been restored to the factory presets. (If the LED blinks three times, then you made a mistake with the code—try re-entering it.) On the VSX-D850S the LCD displays 0123 and then "OK" for two seconds if the four digit code has been accepted. If any error has occurred display will blink three times.

#### **Direct Function**

The direct function is a useful feature which allows you keep the receiver in one function (for example, CD) while putting the remote control in a different function. This could let you, for example, use the remote control to set up and listen to a CD on the receiver and then use the remote control to rewind a tape in your VCR while you continue to listen to your CD player.

When the DIRECT function is ON any MULTI CONTROL button you press will change the function of both the receiver and the remote control. When you turn the DIRECT function OFF, you can operate the remote control without affecting the receiver. Thus you could switch the remote control the VCR and operate that component while the receiver plays a different component.

To set a MULTI CONTROL button to DIRECT ON or DIRECT OFF:

1 Press SETUP and hold for three seconds.

On the VSX-D710S and VSX-D810S the LED on the remote control will light for two seconds. On the VSX-D850S the LCD display SETUP icon will light. If you want to cancel the Direct Function mode, press **SETUP** 

The remote control will also return to the previous mode after thirty seconds of inactivity.

- 2 Press the MULTI CONTROL button that you want to set up.
- 3 Use the number buttons to enter 9990 (DIRECT ON) or 9995 (DIRECT OFF).

The LED will light for half a second on each digit input. Then, on the VSX-D710S and VSX-D810S the LED will light for two seconds to indicate that it's been correctly set. (If the LED blinks three times, then you made a mistake with the code—try reentering it.) On the VSX-D850S, the LCD will display "OK" to show the four digit code has been accepted. If it hasn't been accepted the display will blink three times.

#### MEMO:

 TV CONT doesn't have this feature and thus can't use the DIRECT FUNCTION.

### **Checking Preset Codes**

To check which preset code is associated with a MULTI CONTROL button:

#### VSX-D710S/D810S:

- 1 Press SETUP and hold for three seconds. The LED on the remote control lights for two seconds.
- 2 Press the MULTI CONTROL button you want to check the preset code for.
- 3 Press and hold ENTER for two seconds.

Each preset code consists of four digits, for example 1329. Each digit will be represented by a series of blinks on the remote's LED—3 blinks to represent the digit "3", etc. ("0" is represented by 10 blinks.)

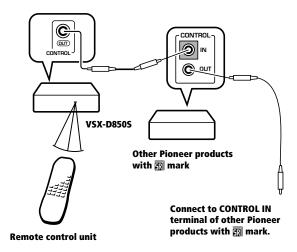
#### VSX-D850S:

1 Press and hold for three seconds the MULTI CONTROL button you want to check the preset code for.

The preset code appears in the remote's LCD display.

# Operating other Pioneer Components

By connecting a control cord (optional), you can control other Pioneer equipment using this remote control unit. Point the remote control unit towards the remote sensor of this unit, even when operating other equipment.



The remote control signals are received by the remote sensor of this unit, and sent to the other devices via the **CONTROL OUT** terminal.

#### мемо:

 You can also control Pioneer components by pointing the receiver's remote control directly at the component. This type of operation does not require control cords.

## CD/MD/CD-R/VCR/DVD/LD/DVR Player/Cassette Deck Controls

This remote control can control these components after entering the proper codes or teaching the receiver the commands (see p.35-37).

Use MULTI CONTROL buttons to put the remote control in the stated mode.

Button(s)	Function	Components
SOURCE O	Press to switch the components between STANDBY and ON.	CD/MD/CD-R/VCR/DVD/LD/ DVR Player/Cassette deck
	Press to return to the start of the current track. Repeated presses skips to the start of previous tracks.	CD/MD/CD-R/DVD/LD Player
<b>44</b>	Go back channels (channel –).	VCR/DVR
	Play the reverse side of the tape on a reversible deck.	Cassette deck
	Press to advance to the start of the next track. Repeated presses skips to the start of following tracks.	CD/MD/CD-R/LD Player
<b>▶▶</b>	Go forward channels (channel +).	VCR
	Play the forward side of the tape on a reversible deck.	Cassette deck
II	Pause playback or recording.	CD/MD/CD-R/VCR/DVD/LD/ DVR Player/Cassette deck
<b>&gt;&gt;</b>	Hold down for fast forward playback.	CD/MD/CD-R/VCR/DVD/LD/ DVR Player/Cassette deck
<b>44</b>	Hold down for fast reverse playback.	CD/MD/CD-R/VCR/DVD/LD/ DVR Player/Cassette deck
<b>&gt;</b>	Start playback.	CD/MD/CD-R/VCR/DVD/LD/ DVR Player/Cassette deck
	Stop playback (on some models, pressing this when the disc is already stopped will cause the disc tray to open).	CD/MD/CD-R/VCR/DVD/LD/ DVR Player/Cassette deck
Number	Directly access tracks on a program source.	CD/MD/CD-R/VCR/LD Player
Buttons	Use the number buttons to navigate the on-screen display.	DVD/DVR Player
+10 Button	Select tracks higher than 10. Press this button and the remaining number to get the track (+10 Button + 3= track 13).	CD/MD/CD-R/VCR/LD Player
DISC Button	Choose the disc.	Multiple CD player
	Ejects thte disc	MD Player
	Press to switches between the VCR tuner and the TV tuner.	VCR/Cassette deck
	Changes sides of the LD.	LD Player
●RECORD Button	Start recording. To prevent accidental recording, this button must be pressed twice to take effect (the second press must be within 10 seconds of the first).	VCR/DVR Player
MENU	Displays menus concerning the current DVD or DVR you are using.	DVD/DVR Player
Δ	Pause the tape.	Cassette deck
$\nabla$	Stop the tape.	Cassette deck
ENTER	Start playback.	Cassette deck
⊲	Fast rewind the tape.	Cassette deck
⊳	Fast forward the tape	Cassette deck
⊲⊳∆∇ & ENTER	Navigate DVD menus/options.	DVD/DVR Player

### **Cable TV/Satellite TV/TV/DTV Controls**

This remote control can control these components after entering the proper codes or teaching the receiver the commands (see p.35-37).

Use MULTI CONTROL buttons to put the remote control in the stated mode.

Button(s)	Function	Components
TV O	Press to switch the DTV on or off.	DTV
	Press to switch the TV or CATV between STANDBY and ON.	Cable TV/Satellite TV/TV
TV FUNC.	Press to switch the TV input. (Not possible with all models. If it doesn't work with the preset code, use the learning feature.)	TV
CHANNEL +/-	Select channels.	Cable TV/Satellite TV/TV/DTV
TV VOL +/-	Adjust the TV volume.	Cable TV/Satellite TV/TV/DTV
SOURCE ()	Press to switch the DTV on or off.	DTV
<b>44</b>	Move to lower numbered channels	Cable TV/Satellite TV/TV
	Choose the RED commands on a DTV menu.	DTV
<b>&gt;&gt;</b>	Use to move to higher numbered channels	Cable TV/Satellite TV/TV
	Use to choose the YELLOW commands on a DTV menu.	DTV
П	Use as the GUIDE button for navigating	DTV
<b>&gt;&gt;</b>	Use to choose the GREEN commands on a DTV menu.	DTV
44	Use to choose the BLUE commands on a DTV menu.	DTV
<b>&gt;</b>	Use to get INFO on the DTV program.	DTV
	Use to switch DTV audio tracks	DTV
Number Buttons	Use to select a specific TV channel.	Cable TV/Satellite TV/TV/DTV
+10 Button	Use to add a decimal point when selecting a specific TV channel.	DTV
DISC Button	Use to enter a channel.	DTV
MENU	Select different menus from the DTV functions.	DTV
	Select the menu screen.	Cable TV/Satellite TV/TV
	Select or adjust and navigate items on the menu screen. ENTER: Use to bring up the DTV menus.	DTV
ENTER	Press to select or adjust and navigate items on the menu screen.	Cable TV/Satellite TV/TV/DTV
EFFECT +/-	For TV and cable TV use this button to immediately enter a new channel (CHANNEL ENTER function). For satellite TV use this button to exit the menu screen.	Cable TV/Satellite TV/TV/DTV

#### MEMO:

• The first four buttons for the VSX-D710S/D810S/D850S are dedicated to control the TV assigned to the **TVC** button. Thus if you only have one TV to hook up to this system assign it to the **TVC MULTI CONTROL** button. If you have two TVs, assign the main TV to the **TVC** button. If you hook up your system this way, the first four TV controls will always be accessible.

## **Preset Code List**

You can only set these codes for the buttons that assigned to the respective components. So, for example, the TV codes can only be set to the TV or TVC button.

			1000 1000 1000		1070
TV	(TV) (TVC)	ANITECH AOC	1006, 1029, 1036 1011, 1013	CS ELECTRONICS CTC	1078 1086
Manufacturer	Code	ARCAM	1078, 1079	CURTIS MATHES	1009, 1013, 1019
PHILIPS	1008, 1017, 1020	ASBERG	1036		1022, 1023, 1025
	1025, 1104, 1115	ASUKA	1080		1026, 1027, 1041
SONY	1001, 1007, 1016	ATLANTIC	1073		1047, 1050, 1057
PANASONIC	1023, 1054, 1055	AUDIOSONIC	1017, 1046		1110, 1113, 1129
	1075, 1076, 1082	AUDIOVOX	1040, 1064, 1110 1118	CYBERTRON	1131 1080
TOCHIDA	1087, 1121, 1124	AUTOVOX	1036, 1073	CXC	1064
TOSHIBA	1015, 1016, 1027 1031, 1050, 1051	BANG & OLUFSEN	1116	DAINICHI	1077, 1080
	1085	BASIC LINE	1006, 1080	DANSAI	1017
TELEFUNKEN	1005, 1026, 1034	BAYSONIC	1064	DAYTRON	1006, 1011
	1038, 1042, 1046	BAUR	1007, 1017, 1114	DECCA	1017, 1032
	1075, 1097	BEK0	1115 1102	DE GRAAF	1074 1047
SHARP	1016, 1019, 1041	BELCOR	1011	DENON DIXI	1006, 1017
SAMSUNG	1056, 1124	BELL & HOWELL	1009, 1050	DUAL TEC	1079
SAIVISUNU	1006, 1011, 1013 1017, 1026, 1027	BEON	1017	DUMONT	1010, 1011, 1031
	1039, 1062, 1079	BINATONE	1079	DWIN	1125, 1127
	1089, 1092, 1102	BLUE SKY	1080	ECE	1017
FERGUSON	1005, 1017, 1033	BLUE STAR	1090	ELBE	1088
	1046, 1065, 1084	BONDSTEC BOOTS	1086 1079	ELECTROBAND ELIN	1001 1017
MITCUDICUI	1091	BPL	1073	ELITE	1080, 1098
MITSUBISHI	1011, 1016, 1041 1045, 1049, 1062	BSR	1095	ELTA	1006
	1114	BRADFORD	1064	EMERSON	1011, 1018, 1019
GOLDSTAR	1002, 1011, 1013	BRANDT	1046, 1069, 1070		1050, 1061, 1062
	1017, 1019, 1026	55,744,444	1072		1063, 1064, 1075
	1046, 1062, 1079	BRITANNIA	1078		1083, 1090, 1112
DI ALIDUALIA	1092	BROCKWOOD BROKSONIC	1011 1083, 1112	ENVISION	1118, 1119 1013
BLAUPUNKT	1066, 1068, 1071	BTC	1080	ERRES	1008, 1017
RADIOLA	1075, 1115 1008, 1017	BUSH	1006, 1016, 1017	ETRON	1006, 1120
JVC	1016, 1024, 1030		1080, 1090, 1095	EXPERT	1073
	1053, 1065, 1067		1103, 1104	FIDELITY	1078
	1103, 1122	CANDLE	1013, 1026	FINLANDIA	1074
DAEW00	1006, 1011, 1017	CARNIVALE CARREFOUR	1013 1016	FINLUX	1017, 1031, 1032 1044
	1019, 1028, 1040	CARVER	1025, 1058	FISHER	1050, 1074, 1079
	1050, 1104, 1110 1118, 1119	CASCADE	1006		1096, 1102
ORION	1017, 1063, 1083	CATHAY	1017	FLINT	1111
	1095, 1098, 1099	CENTURY	1075	FORMENTI	1017, 1075, 1098
	1112	CENTURION	1017	FORTRESS	1041
SIEMENS	1017, 1052, 1066	CELEBRITY CCE	1001 1017	FRONTECH	1055, 1086, 1089 1109
	1068, 1071, 1075	CGE	1034, 1036, 1038	FUJITSU	1032, 1063, 1073
ADMIRAL	1115 1041, 1055, 1075	002	1086, 1097	FUNAI	1059, 1063, 1064
ADMINAL	1112	CIMLINE	1006		1089, 1095, 1096
ADYSON	1014, 1079	CINERAL	1040, 1110	FUTURETECH	1064
AIK0	1040	CITIZEN	1013, 1019, 1026	GE	1012, 1022, 1023
AKAI	1013, 1074	CLARIVOX	1027, 1040 1017		1041, 1062, 1090 1110, 1129, 1131
AKURA	1080, 1089	CLATRONIC	1036, 1086, 1102	GEC	1017, 1020, 1032
ACURA ALARON	1006 1063, 1078	CME	1007, 1015, 1114	020	1072, 1079
ALANON	1005, 1076	CONCERTO	1026	GELOSO	1006, 1075
712571	1080, 1103	CONDOR	1098, 1102	GENEXXA	1055, 1080
ALLORGAN	1095	CONTEC	1006, 1016, 1064	GIBRALTER	1010, 1011, 1013
ANAM	1004, 1006, 1029	CONTINENTAL EDI	1078 SON 1060 1070	GOODMANS	1016, 1017, 1032
	1054, 1064, 1087	CONTINUENTAL EDI-	1072	GORENJE	1079, 1103, 1104 1102
A NIA NA NIATIONIA I	1108	CRAIG	1054	GPM	1080
ANAM NATIONAL AMBASSADOR	1054, 1087, 1108 1061	CROSLEY	1025, 1034, 1036	GRAETZ	1055
AMERICA ACTION	1064		1038, 1075	GRANADA	1017, 1032, 1048
AMPLIVISION	1079	CROWN	1006, 1017, 1019	00.005	1074, 1079, 1100
AMPR0	1126		1036, 1064, 1102	GRADIENTE	1024, 1026, 1058
AMSTRAD	1006, 1017, 1103	CRYSTAL	1106 1109	GRANDIN	1090
	1105	OHIOTAL	. 100		

				BUONOLA	1000 1017
GRUNDIG	1031, 1066, 1068 1072, 1115	MANESTH MARANTZ	1079, 1089, 1098 1013, 1017, 1025	PHONOLA PILOT	1008, 1017 1011, 1013, 1019
GRUNPY	1063, 1064	MARK	1013, 1017, 1023	PORTLAND	1011, 1019, 1040
HALLMARK	1062	MATSUI	1006, 1015, 1016	PRISM	1023
HANSEATIC	1017, 1098	IVIAIOUI	1017, 1032, 1074,	PROFEX	1006, 1037
HARLEY DAVIDSON	· · · · · · · · · · · · · · · · · · ·		1077, 1032, 1074,	PROLINE	1099
HARVARD	1029, 1064	MATSUSHITA	1079, 1093, 1103	PROSOCAN	1022
HARMAN/KARDON	· · · · · · · · · · · · · · · · · · ·	MCMICHAEL	1020	PROTECH	1006, 1017, 1043
HCM		MEDIATOR	1008, 1017	THOTEON	1079, 1086, 1089
HINARI	1006, 1090, 1105				1106, 1109
піімапі	1006, 1016, 1017	MEGATRON	1047, 1062	PROTON	1062, 1113
LIC AVA/A	1080	MEMOREX	1006, 1009, 1026	PULSAR	1010, 1011
HISAWA	1090, 1111		1049, 1050, 1062	PYE	1008
HITACHI	1014, 1016, 1018	NACT7	1087, 1112	QUASAR	1023, 1056, 1087
	1020, 1021, 1026	METZ	1075	QUELLE	1007, 1017, 1031
	1044, 1046, 1047	MGA	1011, 1013, 1049	dolli.	1034, 1038, 1071
	1055, 1069, 1070	MIDLAND	1062 1010, 1019, 1022		1075, 1097, 1114
HUANYU	1079, 1081, 1097	MIDLAND	1010, 1013, 1022		1115
HYPSON	1078, 1104	MINERVA	1031, 1115	QUESTA	1016
	1017, 1089, 1090	MINOKA	1105	R-LINE	1017
ICE ICES	1079, 1089, 1103	MINUTZ	1012	RANK ARENA	1016
IMPERIAL	1080 1034, 1036, 1038	MIVAR	1078, 1092, 1093	RBM	1031
IIVIFENIAL		IVIIVAII	1094	RCA	1011, 1018, 1022
INIDIANIA	1086, 1102, 1106	MOTION	1034	1100	1023, 1039, 1041
INDIANA	1017	MOTOROLA	1041		1128, 1129, 1130
INFINITY	1025	MTC	1011, 1013, 1026		1131, 1132
INGELEN	1055	WITO	1027, 1078, 1114	REALISTIC	1011, 1013, 1019
INNO HIT	1032 1017	MULTITECH	1006, 1036, 1043	ILALIOTIO	1026, 1050, 1056
INNOVA INTEQ	1017	WOLITIZOTI	1064, 1078		1062, 1064
INTERBUY	1029	NAD	1051, 1057, 1062	REX	1055, 1073, 1088
		NEC	1011, 1013, 1016	I IILX	1089
INTERFUNK	1017, 1055, 1086 1114		1026, 1058	REVOX	1017
INTERVISION	1017, 1029, 1043	NECKERMANN	1017, 1066, 1075	ROADSTAR	1006, 1080, 1089
INTERVISION	1079, 1089		1115	HOADOTAIT	1106
ISUKAI	1080	NEI	1017, 1109	RUNCO	1010, 1013, 1117
ITS	1103	NETSAT	1017	SABA	1035, 1046, 1055
ITT	1055	NICAMAGIC	1078	UADA	1069, 1070, 1072
JBL	1025	NIKKAI	1014, 1015, 1017		1075, 1091
JCB	1001		1032, 1078, 1080	SACCS	1084
KAISUI	1006, 1078, 1079		1089	SAISH0	1006, 1089, 1109
KAISUI	1080, 1090,	NIKKO	1013, 1040, 1062	SALORA	1055
KAMP	1078	NOBLIKO	1036, 1043	SAMBERS	1036, 1043, 1075
KAPSCH	1055, 1073	NORDMENDE	1046, 1069, 1070	SAMPO	1013, 1019
KAWASHO	1078		1075, 1091	SAMSUX	1019
KEC	1064	NTC	1040	SANDRA	1078
KENDO	1017	OCEANIC	1055, 1077	SANSEI	1110
KNEISSEL	1088	ONWA	1064	SANSUI	1112
KENWOOD	1011, 1013	OPTIMUS	1050, 1057, 1087	SANY0	1016, 1032, 1048
KINGSLEY	1078	OPTONICA	1041, 1056		1050, 1052, 1074
KONIG	1114	OSAKI	1014, 1032, 1079		1075, 1100
KORPEL	1017	000	1080, 1089, 1105	SBR	1008, 1017, 1020
KOYODA	1006	080	1080	SCHNEIDER	1017, 1080, 1086
KTV	1013, 1019, 1064	OSUME	1014, 1032, 1052		1096, 1103
LEYCO	1017, 1032, 1089	OTTO OTTO VERSAND	1007, 1114	SCIMITSU	1011
	1095	UTTU VENSAND	1007, 1016, 1017 1066, 1075, 1079	SCOTCH	1062
LG	1026		1098, 1115	SCOTT	1011, 1062, 1063
LIESENK&TTER	1017	PALLADIUM	1102, 1116		1064, 1083
LLOYTRON	1014	PANAMA	1079, 1089	SEARS	1022, 1025, 1026
LOEWE	1035, 1114	PATHE MARCONI	1069, 1070, 1072		1050, 1051, 1059
LOGIK	1009	PATHE CINEMA	1075, 1078, 1084		1062, 1063
LUMA	1073	FATTIL CINLINIA	1075, 1076, 1064	SEG	1016, 1036, 1079
LUXMAN	1026	PAUSA	1006		1089
LXI	1022, 1025, 1050	PENNEY	1003, 1011, 1012	SEI	1043, 1075, 1095
	1051, 1062	I LIVIVE!	1013, 1019, 1022	SEI-SINUDYNE	1007
M ELECTRONIC	1006, 1017, 1029		1023, 1026, 1027	SELECO	1055, 1073, 1088
	1044, 1046, 1055		1051, 1062, 1131	SEMIVOX	1064
	1079, 1091, 1104	PERDIO	1098	SEMP	1051
MAGNAVOX	1013, 1016, 1025	PHAPSODY	1078	SENTRA	1015
	1063	PHASE	1014	SHOGUN	1011
MAGNADYNE	1043, 1086	PHILCO	1011, 1013, 1025	SHORAI	1095
MAGNAFON	1036, 1043, 1075		1034, 1036, 1038	SSS	1011, 1064
MAJESTIC	1009		1047, 1075, 1086	SIAREM	1043, 1075
	I		1112	I	

SINDANE	1043, 1075, 1095
SINDYNE SIGNATURE	1009
CILVED	1003
SILVER	1016
SKY	1017
SKY-WORTH	1017
SOLAVOX	1014, 1055
SONITRON	1074
SONOKO	1006, 1017
SONOLOR	1055, 1074, 1077
SONTEC	1017
SOUNDESIGN SOUNDWAVE SQUAREVIEW	1062, 1063, 1064
SOUNDWAVE	1017, 1106
SQUAREVIEW	1059
STANDARD	1006, 1079, 1080
STARLITE	1064
STERN	1055, 1073, 1088
SUNKAI	1095, 1099
SUPERTECH	1078
SUPREME	1001
SUSUMU	1080
SUSUIVIU	1013, 1025
SYLVANIA SYMPHONIC	
	1059
SYSLINE	1017
TANDY	1032, 1041, 1055
	1079, 1080
TASHIKO	1016, 1020, 1079
TEC	1016, 1020, 1079 1079, 1086
TECHNEMA	1098
TECHNICS	1023, 1087, 1121
TECHNOL ACE	1063
TECHWOOD	1023, 1026
TEKNIKA	1009, 1011, 1019
ILKINIKA	1025, 1026, 1027
	1040, 1049, 1063
TELEAL//A	1064
TELEAVIA	1072
TELEMEISTER	1098
TELETECH	1006
TELETON	1016, 1073, 1079
TENSAI	1080, 1095, 1098
TEXET	1078. 1080
THOMSON	1046, 1069, 1070 1072, 1091
	1072, 1091
THORN	1015, 1017, 1032
	1034, 1038, 1065
	1067, 1114
TMK	1067, 1114 1026, 1061, 1062
TOMASHI	1090
TOTEVISION	1019
TRIUMPH	1085
TUTUNG	1017, 1032, 1079
UHER	1073, 1096, 1098
ULTRA	1067
ULTRAVOX	1043
UNIVERSUM	1017, 1044, 1089
	1102
VECTOR RESEARCH	1013
VESTEL	1017
VICTOR	1016, 1024, 1053
	1087
VIDEOSAT	1086
VIDEOTECHNIC	1079
VIDLOTEOTIMO	1025
VIDTECH	1011, 1016, 1062
VISION	
	1098
VOXSON	1055
WALTHAM	1079
WATSON	1017, 1098
WATT RADIO	1043

WARDS	1009, 1011, 1012
	1013, 1025, 1026
	1056, 1062, 1063
WEGA	1016
WHITE WESTINGHO	OUSE 1017, 1078
	1098, 1112, 1118
	1119
YAMAHA	1011, 1013
YOKO	1017, 1079, 1101
	1109
ZANUSSI	1073
ZENITH	1009, 1010, 1040
	1112
PIONEER	1018, 1046, 1055
	1057, 1060, 1091
	1107, 1123, 1124

(cD)

#### Manufacturer Code SONY 5401 **KENWOOD** 5402,5407 SHARP 5403 **ONKYO** 5404 5406 ORION DENON 5405 **PIONEER** 5408

**MD PLAYER** 

LD PLAYER	DV	9
Manufacturer	Code	
AKAI	5222	
BBK	5224	
CYRUS	5207	
DENON	5202	
DISCO VISION	5201	
FUNAI	5217	
HITACHI	5201	
HONG DENG	5213	
IDALL	5219	
KEBA0	5215	
MARANTZ	5203, 5205	
MITSUBISHI	5202	
NAD	5202	
PANASONIC	5210	
PHILIPS	5203, 5207, 520	9
RADIOLA	5207	
ROWA	5212	
SALORA	5203	
SEGA	5201	
SHARP	5221	
SHINCO	5211	
SMC	5220	_
SONY	5204, 5206, 521	6
	5218	
SUPER	5215	
TELEFUNKEN	5202	
TOSHIBA	5223	
PIONEER	5201,5202, 5208	3

5214

QED

**RCA** 

QUAD

QUASAR

5021

5021

5004,

5010, 5025, 5038

#### **CD PLAYER** CD (CD-R) Manufacturer Code **AIWA** 5016, 5021 AKAI 5014, 5020, 5032 **ANAM** 5041 **ARCAM** 5021 **AUDIOLAB** 5021 **AUDIOMECA** 5021 **AUDIO TON** 5021 **BESTAR** 5022 **BURMESTER** 5045 CALIFORNIA AUDIO LABS 5004 **CARVER** 5021, 5025, 5046 CONDOR 5018, 5022 **CURTIS MATHES** 5004 **CYRUS** 5021 **DENON** 5002, 5006, 5040 5060 DKK 5001 DUAL 5031 **DYNAMIC BASS** 5025 **EMERSON** 5038 **EROICA** 5053, 5054 **FANTASIA** 5051 **FISHER** 5024, 5025 **GARRARD** 5044, 5045 5005, 5038 **GENEXXA** GOLDSTAR 5043, 5051 **GRUNDIG** 5021 HARMAN/KARDON 5021, 5023 HITACHI 5005 INKEL 5015, 5026, 5046 JVC 5011 **KENWOOD** 5003, 5008, 5029 5056, 5057, 5062 KRELL 5021 5021 LINN LUXMAN 5036 LXI 5038 MAGNAVOX 5021, 5038 5004, 5009, 5017 MARANTZ 5021, 5026 **MATSUI** 5021 5004 MCS **MEMOREX** 5022 **MERIDIAN** 5021 MICROMEGA 5021 MISSION 5021 MITSUBISHI 5014, 5020 MTC 5045 NAD 5001 NAIM 5021 NIKK0 5024, 5041, 5051 NSM 5021 **ONKYO** 5012, 5013, 5042 5059 **OPTIMUS** 5001, 5005, 5008 5019, 5025, 5038 5045, 5046, 5048 ORION 5061 **PANASONIC** 5004, 5037 **PARASOUND** 5045 **PHILIPS** 5021, 5055 **PMG** 5022 **POPPY** 5022 **PROTON** 5021

TECHNICS 5004, 5034, 5037 THORENS 5021 TOSHIBA 5049 UNIVERSUM 5021 YAMAHA 5007, 5028 YORX 5047 VICTOR 5011	THORENS TOSHIBA UNIVERSUM YAMAHA YORX VICTOR	5021 5049 5021 5007, 5028 5047 5011
WARDS 5010, 5021 PIONEER 5005, 5030, 5035 5038, 5048, 5052 5063	WARDS	5010, 5021 5005, 5030, 5035 5038, 5048, 5052

#### TAPE DECK



Manufacturer	Code
ADC	6013
AIWA	6002, 6022, 6017
	6018
AKAI	6015, 6016
ANAM	6035
ARCAM	6005
CARVER	6002, 6028
DENON	6005, 6039
DUAL	6037
DYNAMIC BASS	6028
EROICA	6041
FISHER	6028
GARRARD	6036
GOLDSTAR	6036
GRUNDIG	6002
HARMON/KARDON	
INKEL	6003
JVC	6027, 6030, 6031
KENWOOD	6003, 6004, 6019
	6024, 6025
KYOCERA	6013
LOTTE	6034
LUXMAN	6029
MAGNAVOX	6002
MARANTZ	6002
MEMOREX	6008, 6009
MITSUBISHI	6016
NAKAMICHI	6020
NIKKO	6035
OLYMPUS	6029
ONKYO	6010, 6011, 6032
OPTIMUS	6001, 6021
PANASONIC	6023
PHILIPS	6002
RCA	6028
RENAISSANCE	6040

6002

SAMSUNG	6038
SANSUI	6002
SANY0	6028
SHARP	6019
SONIC	6036
SONY	6012, 6026, 6033
TEAC	6038
TECHNICS	6023
THORENS	6002
VICTOR	6027, 6030
WARDS	6001
YAMAHA	6006, 6007, 6019
PIONEER	6001, 6008, 6009
	6021,

#### DVD PLAYER

(DVD)

Manufacturer	Code
TOSHIBA	5302
SONY	5306
PANASONIC	5301, 5322
KENWOOD	5307
JVC	5311, 5318
SAMSUNG	5313
AKAI	5316
HARMAN/KARDON	5314
MAGNAVOX	5302
MITSUBISHI	5303
ONKY0	5302, 5317, 5319
PROSCAN	5304
RCA	5304
SHARP	5320
THETA DIGITAL	5312
TECHNICS	5301
THOMSON	5310
YAMAHA	5301, 5309
PHILIPS	5302, 5308
ZENITH	5302, 5315
PIONEER	5305, 5312, 5321
	5322

#### **AMPLIFIER**



Manufacturer	Code
AUDIOLAB	8005
DENON	8002
GRUNDIG	8005
MARANTZ	8005
MICROMEGA	8005
PHILIPS	8005
PIONEER	8004
REVOX	8005
TANDBERG	8003
THORENS	8005
YAMAHA	8001, 8006

#### **MISC AUDIO**



ManufacturerCodeJERROLD8201, 8203STARCOM8201SCIENTIFIC ATLANTA8202

#### **RECEIVERS**

(TUN)

	$\overline{}$
Manufacturer	Code
ADC	7042
AIWA	7012, 7023, 7031
AIVA	7055, 7064
AKAI	7011, 7027
ANAM	7010, 7046
ARCAM	7018, 7048
AUDIOLAB	7059
CAPETRONIC	7042
CARVER	7055, 7059
CURTIS	7008
DAEW00	7032
DENON	7001, 7056, 7058
DUAL	7040
EROICA	7005
FANTASIA	7037
FERGUSON	7042
FINE ARTS	7059
FISHER	7028
GARRARD	7032, 7034, 7035
GOLDSTAR	7010
GOODMANS	7027
GP AUDIO	7033
GRUNDIG	7018, 7059
HARMAN/KARDON	7009, 7051
INKEL	7038, 7040
JBL	7009
JVC	7007, 7036, 7042
	7007, 7030, 7042
KENWOOD	7003, 7017, 7025
	7026, 7044, 7053
	7063, 7066
LOTTE	7037, 7039
LUXMAN	7021
MAGNAVOX	7030, 7042, 7055
	7059
MARANTZ	7004, 7018, 7055
	7059
MCINTOSH	7020
MCS	7004
MCSILVER	7037
MICROMEGE	7018, 7059
	7010, 7000
NIKKO	7032, 7037, 7046
OPTIMUS	7017, 7034, 7042
	7049, 7052
ONKYO	7013, 7029
PALLADIUM	7050
PANASONIC	7004, 7024, 7041
PHILIPS	7018, 7030, 7045
	7048, 7051, 7055
	7059
PHONOTREND	7038
QUASAR	7004
RCA	7006, 7042
RENAISSANCE	7043
REVOX	7018
ROADSTAR	7027
SABA	7042
SAISH0	7027
SAMSUNG	7010
SANSUI	7027, 7055
SANYO	7028
J. 1111 J	. 520

REVOX

SCHNEIDER	7042	AMERICA ACTION	2059	FISHER	2025, 2026, 2030
SHARP	7017	AMERICAN HIGH	2015		2037
SHERWOOD	7038	AMSTRAD	2001, 2059, 2067	FRONTECH	2011
SOUNDESIGN	7049		2068	FUJI	2015
SONY	7015, 7054, 7057	ANAM	2017, 2042, 2054	FUNAI	2001
TAF KAAANO	7060		2057, 2059, 2082	GARRARD	2001
TAE KWANG	7034	ANIANANIATIONIAI	2084	GE	2015, 2027, 2032
TEAC	7010, 7035	ANAM NATIONAL	2042, 2054, 2087	CEC	2057
TECHNICS TELEFUNKEN	7004, 7062, 7065	ANITECH ASA	2034	GEC GENERAL	2035
IELEFUNKEN	7019, 7024, 7041 7061, 7062, 7065	ASHA	2017, 2035 2057	GOLDHAND	2011, 2028 2034
THORENS	7018, 7059	ASUKA	2017	GOLDSTAR	2017, 2018, 2053
UHER	7010, 7033	AUDIOVOX	2017	GOLDOTAIT	2079
VICTOR	7007	BAIRD	2001, 2021, 2037	GOODMANS	2001, 2017, 2034
WARDS	7002, 7006, 7008		2039	0002	2059, 2075
YAMAHA	7016, 7017	BASIC LINE	2011, 2034, 2059	GO VIDEO	2077, 2081
PIONEER	7002, 7008, 7014	BEAUMARK	2057	GRAETZ	2005, 2021, 2037
	7022, 7042, 7047	BELL & HOWELL	2037		2057
	7050, 7052	BRANDT	2047, 2064, 2065	GRANADA	2025, 2035, 2037
		BRANDT ELECTRO		GRADIENTE	2001, 2008
VCR	(vcr)	BROKSONIC	2002, 2040, 2046	GRANDIN	2001, 2017, 2034
			2052, 2078	HANSEATIC	2017
Manufacturer	Code	BUSH	2034, 2052, 2059	HARMAN/KARDON	•
PHILIPS	2015, 2035, 2074		2072	HARLEY DAVIDSON	
	2075	CALIX	2017	HARWOOD	2034
PANASONIC	2015, 2042, 2053	CANON	2015	HCM	2034
TUOMOON	2054, 2055, 2087	CAPEHART	2011	HEADQUARTER	2025
THOMSON	2021, 2064, 2074	CARVER	2035	HINARI	2004, 2034, 2057
SONY	2001, 2009, 2012	CATRON	2011	111.0	2072
IVC	2013, 2014, 2015	CCE	2034, 2059	HI-Q HUGHES NETWORK	2026
JVC	2008, 2021, 2033 2049, 2050, 2074	CGE CIMLINE	2001 2034	HYPSON	2034
	2080	CINERAL	2059	IMPERIAL	2001
GRUNDIG	2003, 2005, 2007	CITIZEN	2017, 2059	INGERSOL	2004
OHOHOIO	2010, 2034, 2035	CLATRONIC	2011	INTERFUNK	2035
	2048, 2050, 2054	COLT	2034	ITT	2005, 2021, 2025
	2069, 2071, 2075	COMBITECH	2072		2037, 2038, 2057
AKAI	2021, 2029, 2038	CONDOR	2011		2074
	2060, 2063	CRAIG	2017, 2026, 2034	ITV	2017, 2059
HITACHI	2001, 2004, 2021		2057, 2058	JENSEN	2021
	2022, 2043, 2056	CROWN	2011, 2034, 2059	KAISUI	2034
	2057	CURTIS MATHES	2015, 2021, 2032	KEC	2017, 2059
TOSHIBA	2021, 2023, 2024		2042	KEND0	2038, 2052
	2035, 2074	CYBERNEX	2057	KENWOOD	2018, 2021, 2033
MITSUBISHI	2023, 2027, 2033	CYRUS	2035	KLH	2034
CHARR	2035, 2045	DAEW00	2011, 2024, 2025	KODAK	2015, 2017
SHARP	2027, 2073	DANICAL	2059, 2083	KORPEL	2034
ORION	2002, 2004, 2016	DANSAI	2034	LAYCO	2034
	2036, 2046, 2052 2070, 2072, 2078	DAYTRON DECCA	2011 2001, 2035	LENCO LG	2059 2079
SANY0	2025, 2026, 2037	DE GRAAF	2022, 2043	LLOYD'S	2001, 2051
JANTO	2057	DENON	2022, 2043	LOEWE	2004, 2005, 2017
FERGUSON	2021, 2039, 2064	DUAL	2021	LOLVVL	2035
	2065	DUMONT	2001, 2035, 2037	LOGIK	2004, 2034, 2057
BLAUPUNKT	2003, 2005, 2010	DYNATECH	2001	LUXOR	2023, 2025, 2027
	2014, 2041, 2042	ELBE	2018		2037, 2038
	2048, 2054, 2055	ELCATECH	2034	LXI	2017
	2075	ELECTROHOME	2017	M ELECTRONIC	2001
NOKIA	2025, 2037, 2038	ELECTROPHONIC	2017	MAGNASONIC	2059
	2057	EMEREX	2012	MAGNAVOX	2001, 2015, 2019
ADMIRAL	2027, 2052	EMERSON	2001, 2002, 2017		2035
ADVENTURA	2001		2023, 2040, 2046	MAGNIN	2057
AIKO	2059		2051, 2052, 2059	MANESTH	2024, 2034
AIWA	2001, 2017, 2062	F00	2078, 2083	MARANTZ	2003, 2005, 2015
A KID A	2070, 2072	ESC	2057, 2059	NAA DTA	2035
AKIBA	2034	FIDELITY	2001	MARTA	2017
ALBA	2011, 2034, 2052	FINLANDIA	2035, 2037	MATSUI	2004, 2016, 2036
AMBASSADOR	2059, 2063, 2072 2011	FINLUX	2001, 2022, 2035	MATSUSHITA	2052, 2070, 2072 2015, 2042, 2055
MINDAGONADOII	2011	FIRSTLINE	2037 2017, 2023, 2024	MEI	2015, 2042, 2055
		IIIIOILIINL	2017, 2023, 2024 2034, 2052	MELECTRONIC	2018

MEMOREX	2001, 2015, 2017	REALISTIC	2001, 2015, 2017,	TOWADA	2066
MEMOREX	2019, 2025, 2026	TIE/TEIOTTO	2025, 2026, 2027,	UHER	2057
	2027, 2037, 2052	DEV	2037	UNITECH	2057
	2057, 2062, 2085	REX	2021, 2074	UNIVERSUM	2001, 2006, 2010
	2087, 2088	RFT	2075		2017, 2035, 2038
MEMPHIS	2034	RICOH	2014		2048, 2057, 2067
METZ	2003, 2005, 2017	ROADSTAR	2017, 2034, 2057	VECTOR	2024
	2042, 2048, 2055		2059	VECTOR RESEARCH	1 2018 2020
	2069	RUNCO	2019	VICTOR	2008, 2021, 2033
1404				VIDEO CONCEPTS	
MGA	2023, 2057	SABA	2021, 2049, 2050		2020, 2024
MGN TECHNOLOG			2061, 2064, 2065	VIDEOSONIC	2057
MINCRVA	2048		2074	WARDS	2001, 2015, 2022
MINERVA	2005, 2010, 2048	SAISHO	2004, 2016, 2036		2026, 2027, 2032
MINOLTA	2022		2052		2034, 2035, 2057
MOTOROLA	2015, 2027	SALORA	2023, 2025, 2038	WHITE WESTINGH	OUSE 2052, 2059
MTC	2001, 2057	SANKY	2019, 2027	XR-1000	2001
MULTITECH		SANSUI	2001, 2021, 2033	XR-1001	2015
	2001, 2034	UANUUI		XR-1001 XR-1002	2034
MURPHY	2001	CANACHNIC	2052, 2058, 2078		
NAD	2031	SAMSUNG	2024, 2057, 2076	YAMAHA	2018
NATIONAL	2054		2077	YAMISHI	2034
NEC	2018, 2020, 2021	SAVILLE	2072	YOKAN	2034
	2033, 2037	SBR	2035	YOKO	2011, 2057
NECKERMANN	2035	SCHAUB LORENZ	2001, 2005, 2021	ZENITH	2001, 2014, 2019
NESCO	2034		2037		2052, 2078
		SCHNEIDER		PIONEER	•
NIKKO	2017		2001, 2034, 2035	FIUNEEN	2031, 2033, 2035
NIKON	2014	SCOTT	2023, 2024, 2040		2044, 2056
NOBLEX	2057		2046		
NOKIA	2021, 2025, 2037	SEARS	2001, 2015, 2017	SATELLITE TUNI	ER (TV) (TVC)
	2038, 2057		2022, 2025, 2026		
NORDMENDE	2021, 2061, 2064		2037	Manufacturer	Code
HOHDINEHDE	2065, 2074	SEG	2057, 2066		4006
OCEANIC		SEI	2004, 2035	ABSAT	
	2001, 2021	SELECO	2021	AST	4027
OKANO	2063, 2070			ALBA	4029, 4034, 4037
OLYMPUS	2015, 2054	SEMP	2024		4052
OPTIMUS	2017, 2027, 2031	SENTRA	2011	ALDES	4019
OI IIIVIOO	2017, 2027, 2001			ALDLO	4013
OI TIMOO	2037, 2042, 2077	SHINTOM	2034, 2037		
or rivido	2037, 2042, 2077			AMSTRAD	4003, 4016, 4025
	2037, 2042, 2077 2086, 2087, 2088	SHINTOM	2034, 2037	AMSTRAD	4003, 4016, 4025 4038, 4039, 4042
OSAKI	2037, 2042, 2077 2086, 2087, 2088 2001, 2017, 2034	SHINTOM SHOGUN SHORAI	2034, 2037 2057 2004		4003, 4016, 4025 4038, 4039, 4042 4013, 4019, 4030
OSAKI OTTO VERSAND	2037, 2042, 2077 2086, 2087, 2088 2001, 2017, 2034 2035	SHINTOM SHOGUN	2034, 2037 2057 2004 2003, 2005, 2010	AMSTRAD ANKARO	4003, 4016, 4025 4038, 4039, 4042 4013, 4019, 4030 4044
OSAKI	2037, 2042, 2077 2086, 2087, 2088 2001, 2017, 2034 2035 2005, 2017, 2021	SHINTOM SHOGUN SHORAI	2034, 2037 2057 2004 2003, 2005, 2010 2017, 2030, 2035	AMSTRAD ANKARO ANTTRON	4003, 4016, 4025 4038, 4039, 4042 4013, 4019, 4030 4044 4009, 4034
OSAKI OTTO VERSAND PALLADIUM	2037, 2042, 2077 2086, 2087, 2088 2001, 2017, 2034 2035 2005, 2017, 2021 2034	SHINTOM SHOGUN SHORAI SIEMENS	2034, 2037 2057 2004 2003, 2005, 2010 2017, 2030, 2035 2037, 2048	AMSTRAD ANKARO ANTTRON ARMSTRONG	4003, 4016, 4025 4038, 4039, 4042 4013, 4019, 4030 4044 4009, 4034 4015
OSAKI OTTO VERSAND PALLADIUM PATHE MARCONI	2037, 2042, 2077 2086, 2087, 2088 2001, 2017, 2034 2035 2005, 2017, 2021 2034 2021	SHINTOM SHOGUN SHORAI SIEMENS	2034, 2037 2057 2004 2003, 2005, 2010 2017, 2030, 2035 2037, 2048 2017	AMSTRAD ANKARO ANTTRON ARMSTRONG ASTRA	4003, 4016, 4025 4038, 4039, 4042 4013, 4019, 4030 4044 4009, 4034
OSAKI OTTO VERSAND PALLADIUM	2037, 2042, 2077 2086, 2087, 2088 2001, 2017, 2034 2035 2005, 2017, 2021 2034	SHINTOM SHOGUN SHORAI SIEMENS SILVA SINGER	2034, 2037 2057 2004 2003, 2005, 2010 2017, 2030, 2035 2037, 2048 2017 2024, 2034	AMSTRAD ANKARO ANTTRON ARMSTRONG	4003, 4016, 4025 4038, 4039, 4042 4013, 4019, 4030 4044 4009, 4034 4015
OSAKI OTTO VERSAND PALLADIUM PATHE MARCONI	2037, 2042, 2077 2086, 2087, 2088 2001, 2017, 2034 2035 2005, 2017, 2021 2034 2021	SHINTOM SHOGUN SHORAI SIEMENS SILVA SINGER SINUDYNE	2034, 2037 2057 2004 2003, 2005, 2010 2017, 2030, 2035 2037, 2048 2017 2024, 2034 2004, 2035	AMSTRAD ANKARO ANTTRON ARMSTRONG ASTRA	4003, 4016, 4025 4038, 4039, 4042 4013, 4019, 4030 4044 4009, 4034 4015 4005
OSAKI OTTO VERSAND PALLADIUM PATHE MARCONI PATHE CINEMA	2037, 2042, 2077 2086, 2087, 2088 2001, 2017, 2034 2035 2005, 2017, 2021 2034 2021 2016	SHINTOM SHOGUN SHORAI SIEMENS SILVA SINGER	2034, 2037 2057 2004 2003, 2005, 2010 2017, 2030, 2035 2037, 2048 2017 2024, 2034	AMSTRAD ANKARO ANTTRON ARMSTRONG ASTRA ASTRO AVALON	4003, 4016, 4025 4038, 4039, 4042 4013, 4019, 4030 4044 4009, 4034 4015 4005 4008, 4039, 4045 4031
OSAKI OTTO VERSAND PALLADIUM PATHE MARCONI PATHE CINEMA PENTAX	2037, 2042, 2077 2086, 2087, 2088 2001, 2017, 2034 2035 2005, 2017, 2021 2034 2021 2016 2022 2015, 2017, 2018	SHINTOM SHOGUN SHORAI SIEMENS SILVA SINGER SINUDYNE	2034, 2037 2057 2004 2003, 2005, 2010 2017, 2030, 2035 2037, 2048 2017 2024, 2034 2004, 2035	AMSTRAD ANKARO ANTTRON ARMSTRONG ASTRA ASTRO AVALON AXIS	4003, 4016, 4025 4038, 4039, 4042 4013, 4019, 4030 4044 4009, 4034 4015 4005 4008, 4039, 4045 4031 4030, 4046
OSAKI OTTO VERSAND PALLADIUM PATHE MARCONI PATHE CINEMA PENTAX PENNY	2037, 2042, 2077 2086, 2087, 2088 2001, 2017, 2034 2035 2005, 2017, 2021 2034 2021 2016 2022 2015, 2017, 2018 2020, 2022, 2057	SHINTOM SHOGUN SHORAI SIEMENS SILVA SINGER SINUDYNE SOLAVOX	2034, 2037 2057 2004 2003, 2005, 2010 2017, 2030, 2035 2037, 2048 2017 2024, 2034 2004, 2035 2011 2025	AMSTRAD ANKARO ANTTRON ARMSTRONG ASTRA ASTRO AVALON AXIS BT	4003, 4016, 4025 4038, 4039, 4042 4013, 4019, 4030 4044 4009, 4034 4015 4005 4008, 4039, 4045 4031 4030, 4046 4053
OSAKI OTTO VERSAND PALLADIUM  PATHE MARCONI PATHE CINEMA PENTAX PENNY  PERDIO	2037, 2042, 2077 2086, 2087, 2088 2001, 2017, 2034 2035 2005, 2017, 2021 2034 2021 2016 2022 2015, 2017, 2018 2020, 2022, 2057 2001	SHINTOM SHOGUN SHORAI SIEMENS SILVA SINGER SINUDYNE SOLAVOX SONOLOR SONTEC	2034, 2037 2057 2004 2003, 2005, 2010 2017, 2030, 2035 2037, 2048 2017 2024, 2034 2004, 2035 2011 2025 2017	AMSTRAD  ANKARO  ANTTRON ARMSTRONG ASTRA ASTRO AVALON AXIS BT BEKO	4003, 4016, 4025 4038, 4039, 4042 4013, 4019, 4030 4044 4009, 4034 4015 4005 4008, 4039, 4045 4031 4030, 4046 4053 4010
OSAKI OTTO VERSAND PALLADIUM PATHE MARCONI PATHE CINEMA PENTAX PENNY	2037, 2042, 2077 2086, 2087, 2088 2001, 2017, 2034 2035 2005, 2017, 2021 2034 2021 2016 2022 2015, 2017, 2018 2020, 2022, 2057 2001 2015, 2018, 2052	SHINTOM SHOGUN SHORAI SIEMENS SILVA SINGER SINUDYNE SOLAVOX SONOLOR SONTEC STS	2034, 2037 2057 2004 2003, 2005, 2010 2017, 2030, 2035 2037, 2048 2017 2024, 2034 2004, 2035 2011 2025 2017 2022	AMSTRAD  ANKARO  ANTTRON ARMSTRONG ASTRA ASTRO AVALON AXIS BT BEKO BEST	4003, 4016, 4025 4038, 4039, 4042 4013, 4019, 4030 4044 4009, 4034 4015 4008, 4039, 4045 4031 4030, 4046 4053 4010 4030
OSAKI OTTO VERSAND PALLADIUM  PATHE MARCONI PATHE CINEMA PENTAX PENNY  PERDIO PHILCO	2037, 2042, 2077 2086, 2087, 2088 2001, 2017, 2034 2035 2005, 2017, 2021 2034 2021 2016 2022 2015, 2017, 2018 2020, 2022, 2057 2001 2015, 2018, 2052 2078	SHINTOM SHOGUN SHORAI SIEMENS SILVA SINGER SINUDYNE SOLAVOX SONOLOR SONTEC STS SUNKAI	2034, 2037 2057 2004 2003, 2005, 2010 2017, 2030, 2035 2037, 2048 2017 2024, 2034 2004, 2035 2011 2025 2017 2022 2017	AMSTRAD  ANKARO  ANTTRON ARMSTRONG ASTRA ASTRO AVALON AXIS BT BEKO BEST BLAUPUNKT	4003, 4016, 4025 4038, 4039, 4042 4013, 4019, 4030 4044 4009, 4034 4015 4008, 4039, 4045 4031 4030, 4046 4053 4010 4030 4008
OSAKI OTTO VERSAND PALLADIUM  PATHE MARCONI PATHE CINEMA PENTAX PENNY  PERDIO PHILCO PHONOLA	2037, 2042, 2077 2086, 2087, 2088 2001, 2017, 2034 2035 2005, 2017, 2021 2034 2021 2016 2022 2015, 2017, 2018 2020, 2022, 2057 2001 2015, 2018, 2052 2078 2035	SHINTOM SHOGUN SHORAI SIEMENS SILVA SINGER SINUDYNE SOLAVOX SONOLOR SONTEC STS SUNKAI SUNSTAR	2034, 2037 2057 2004 2003, 2005, 2010 2017, 2030, 2035 2037, 2048 2017 2024, 2034 2004, 2035 2011 2025 2017 2022 2070 2001	AMSTRAD  ANKARO  ANTTRON ARMSTRONG ASTRA ASTRO AVALON AXIS BT BEKO BEST BLAUPUNKT BOCA	4003, 4016, 4025 4038, 4039, 4042 4013, 4019, 4030 4044 4009, 4034 4015 4008, 4039, 4045 4031 4030, 4046 4053 4010 4030 4008 4015, 4043
OSAKI OTTO VERSAND PALLADIUM  PATHE MARCONI PATHE CINEMA PENTAX PENNY  PERDIO PHILCO  PHONOLA PILOT	2037, 2042, 2077 2086, 2087, 2088 2001, 2017, 2034 2035 2005, 2017, 2021 2034 2021 2016 2022 2015, 2017, 2018 2020, 2022, 2057 2001 2015, 2018, 2052 2078 2035 2017	SHINTOM SHOGUN SHORAI SIEMENS  SILVA SINGER SINUDYNE SOLAVOX SONOLOR SONTEC STS SUNKAI SUNSTAR SUNTRONIC	2034, 2037 2057 2004 2003, 2005, 2010 2017, 2030, 2035 2037, 2048 2017 2024, 2034 2004, 2035 2011 2025 2017 2022 2070 2001	AMSTRAD  ANKARO  ANTTRON ARMSTRONG ASTRA ASTRO AVALON AXIS BT BEKO BEST BLAUPUNKT BOCA BRAIN WAVE	4003, 4016, 4025 4038, 4039, 4042 4013, 4019, 4030 4044 4009, 4034 4005 4008, 4039, 4045 4031 4030, 4046 4053 4010 4030 4008 4015, 4043 4022
OSAKI OTTO VERSAND PALLADIUM  PATHE MARCONI PATHE CINEMA PENTAX PENNY  PERDIO PHILCO PHONOLA	2037, 2042, 2077 2086, 2087, 2088 2001, 2017, 2034 2035 2005, 2017, 2021 2034 2021 2016 2022 2015, 2017, 2018 2020, 2022, 2057 2001 2015, 2018, 2052 2078 2035	SHINTOM SHOGUN SHORAI SIEMENS SILVA SINGER SINUDYNE SOLAVOX SONOLOR SONTEC STS SUNKAI SUNSTAR	2034, 2037 2057 2004 2003, 2005, 2010 2017, 2030, 2035 2037, 2048 2017 2024, 2034 2004, 2035 2011 2025 2017 2022 2070 2001 2001, 2015, 2023	AMSTRAD  ANKARO  ANTTRON ARMSTRONG ASTRA ASTRO AVALON AXIS BT BEKO BEST BLAUPUNKT BOCA	4003, 4016, 4025 4038, 4039, 4042 4013, 4019, 4030 4044 4009, 4034 4005 4008, 4039, 4045 4031 4030, 4046 4053 4010 4030 4008 4015, 4043 4022
OSAKI OTTO VERSAND PALLADIUM  PATHE MARCONI PATHE CINEMA PENTAX PENNY  PERDIO PHILCO  PHONOLA PILOT	2037, 2042, 2077 2086, 2087, 2088 2001, 2017, 2034 2035 2005, 2017, 2021 2034 2021 2016 2022 2015, 2017, 2018 2020, 2022, 2057 2001 2015, 2018, 2052 2078 2035 2017	SHINTOM SHOGUN SHORAI SIEMENS  SILVA SINGER SINUDYNE SOLAVOX SONOLOR SONTEC STS SUNKAI SUNSTAR SUNTRONIC	2034, 2037 2057 2004 2003, 2005, 2010 2017, 2030, 2035 2037, 2048 2017 2024, 2034 2004, 2035 2011 2025 2017 2022 2070 2001	AMSTRAD  ANKARO  ANTTRON ARMSTRONG ASTRA ASTRO AVALON AXIS BT BEKO BEST BLAUPUNKT BOCA BRAIN WAVE	4003, 4016, 4025 4038, 4039, 4042 4013, 4019, 4030 4044 4009, 4034 4005 4008, 4039, 4045 4031 4030, 4046 4053 4010 4030 4008 4015, 4043 4022
OSAKI OTTO VERSAND PALLADIUM  PATHE MARCONI PATHE CINEMA PENTAX PENNY  PERDIO PHILCO  PHONOLA PILOT PORTLAND PROFEX	2037, 2042, 2077 2086, 2087, 2088 2001, 2017, 2034 2035 2005, 2017, 2021 2034 2021 2016 2022 2015, 2017, 2018 2020, 2022, 2057 2001 2015, 2018, 2052 2078 2035 2017 2011 2066	SHINTOM SHOGUN SHORAI SIEMENS  SILVA SINGER SINUDYNE SOLAVOX SONOLOR SONTEC STS SUNKAI SUNSTAR SUNTRONIC	2034, 2037 2057 2004 2003, 2005, 2010 2017, 2030, 2035 2037, 2048 2017 2024, 2034 2004, 2035 2011 2025 2017 2022 2070 2001 2001, 2015, 2023	AMSTRAD  ANKARO  ANTTRON ARMSTRONG ASTRA ASTRO AVALON AXIS BT BEKO BEST BLAUPUNKT BOCA BRAIN WAVE BRITISH SKY BROA BUSH	4003, 4016, 4025 4038, 4039, 4042 4013, 4019, 4030 4044 4009, 4034 4015 4008, 4039, 4045 4031 4030, 4046 4053 4010 4030 4008 4015, 4043 4012 DCASTING 4058 4002
OSAKI OTTO VERSAND PALLADIUM  PATHE MARCONI PATHE CINEMA PENTAX PENNY  PERDIO PHILCO  PHONOLA PILOT PORTLAND PROFEX PROFITRONIC	2037, 2042, 2077 2086, 2087, 2088 2001, 2017, 2034 2035 2005, 2017, 2021 2034 2021 2016 2022 2015, 2017, 2018 2020, 2022, 2057 2001 2015, 2018, 2052 2078 2035 2017 2011 2066 2057	SHINTOM SHOGUN SHORAI SIEMENS  SILVA SINGER SINUDYNE SOLAVOX SONOLOR SONTEC STS SUNKAI SUNSTAR SUNTRONIC SYLVANIA	2034, 2037 2057 2004 2003, 2005, 2010 2017, 2030, 2035 2037, 2048 2017 2024, 2034 2004, 2035 2011 2025 2017 2022 2070 2001 2001, 2015, 2023 2035	AMSTRAD  ANKARO  ANTTRON ARMSTRONG ASTRA ASTRO AVALON AXIS BT BEKO BEST BLAUPUNKT BOCA BRAIN WAVE BRITISH SKY BROA BUSH CNT	4003, 4016, 4025 4038, 4039, 4042 4013, 4019, 4030 4044 4009, 4034 4015 4005 4008, 4039, 4045 4031 4030, 4046 4053 4010 4030 4008 4015, 4043 4022 DCASTING 4058 4002 4045
OSAKI OTTO VERSAND PALLADIUM  PATHE MARCONI PATHE CINEMA PENTAX PENNY  PERDIO PHILCO  PHONOLA PILOT PORTLAND PROFEX PROFITRONIC PROLINE	2037, 2042, 2077 2086, 2087, 2088 2001, 2017, 2034 2035 2005, 2017, 2021 2034 2021 2016 2022 2015, 2017, 2018 2020, 2022, 2057 2001 2015, 2018, 2052 2078 2035 2017 2011 2066 2057 2001	SHINTOM SHOGUN SHORAI SIEMENS  SILVA SINGER SINUDYNE SOLAVOX SONOLOR SONTEC STS SUNKAI SUNSTAR SUNTRONIC SYLVANIA  SYMHONIC TASHIKO	2034, 2037 2057 2004 2003, 2005, 2010 2017, 2030, 2035 2037, 2048 2017 2024, 2034 2004, 2035 2011 2025 2017 2022 2070 2001 2001 2001, 2015, 2023 2035 2001 2001	AMSTRAD  ANKARO  ANTTRON ARMSTRONG ASTRA ASTRO AVALON AXIS BT BEKO BEST BLAUPUNKT BOCA BRAIN WAVE BRITISH SKY BROA BUSH CNT CAMBRIDGE	4003, 4016, 4025 4038, 4039, 4042 4013, 4019, 4030 4044 4009, 4034 4015 4005 4008, 4039, 4045 4031 4030, 4046 4053 4010 4030 4008 4015, 4043 4015, 4043 4002 DCASTING 4058 4002 4045 4024
OSAKI OTTO VERSAND PALLADIUM  PATHE MARCONI PATHE CINEMA PENTAX PENNY  PERDIO PHILCO  PHONOLA PILOT PORTLAND PROFEX PROFITRONIC PROLINE PROSCAN	2037, 2042, 2077 2086, 2087, 2088 2001, 2017, 2034 2035 2005, 2017, 2021 2034 2021 2016 2022 2015, 2017, 2018 2020, 2022, 2057 2001 2015, 2018, 2052 2078 2035 2017 2011 2066 2057 2001 2032	SHINTOM SHOGUN SHORAI SIEMENS  SILVA SINGER SINUDYNE SOLAVOX SONOLOR SONTEC STS SUNKAI SUNSTAR SUNSTAR SUNSTAR SUNTRONIC SYLVANIA  SYMHONIC TASHIKO TATUNG	2034, 2037 2057 2004 2003, 2005, 2010 2017, 2030, 2035 2037, 2048 2017 2024, 2034 2004, 2035 2011 2025 2017 2022 2070 2001 2001 2001, 2015, 2023 2035 2001 2001 2001 2001 2001, 2021, 2035	AMSTRAD  ANKARO  ANTTRON ARMSTRONG ASTRA ASTRO AVALON AXIS BT BEKO BEST BLAUPUNKT BOCA BRAIN WAVE BRITISH SKY BROA BUSH CNT CAMBRIDGE CANAL SATELLITE	4003, 4016, 4025 4038, 4039, 4042 4013, 4019, 4030 4044 4009, 4034 4015 4005 4008, 4039, 4045 4031 4030, 4046 4053 4010 4030 4008 4015, 4043 4022 DCASTING 4058 4002 4045 4024 4059
OSAKI OTTO VERSAND PALLADIUM  PATHE MARCONI PATHE CINEMA PENTAX PENNY  PERDIO PHILCO  PHONOLA PILOT PORTLAND PROFEX PROFITRONIC PROLINE PROSCAN PROTEC	2037, 2042, 2077 2086, 2087, 2088 2001, 2017, 2034 2035 2005, 2017, 2021 2034 2021 2016 2022 2015, 2017, 2018 2020, 2022, 2057 2001 2015, 2018, 2052 2078 2035 2017 2011 2066 2057 2001 2032 2034	SHINTOM SHOGUN SHORAI SIEMENS  SILVA SINGER SINUDYNE SOLAVOX SONOLOR SONTEC STS SUNKAI SUNSTAR SUNTRONIC SYLVANIA  SYMHONIC TASHIKO TATUNG TEAC	2034, 2037 2057 2004 2003, 2005, 2010 2017, 2030, 2035 2037, 2048 2017 2024, 2034 2004, 2035 2011 2025 2017 2022 2070 2001 2001, 2015, 2023 2035 2001 2001 2001, 2021, 2035 2001, 2021, 2035 2001, 2021, 2035	AMSTRAD  ANKARO  ANTTRON ARMSTRONG ASTRA ASTRO AVALON AXIS BT BEKO BEST BLAUPUNKT BOCA BRAIN WAVE BRITISH SKY BROA BUSH CNT CAMBRIDGE CANAL SATELLITE CANAL+	4003, 4016, 4025 4038, 4039, 4042 4013, 4019, 4030 4044 4009, 4034 4015 4008, 4039, 4045 4031 4030, 4046 4053 4010 4030 4008 4015, 4043 4022 DCASTING 4058 4002 4045 4024 4059 4059
OSAKI OTTO VERSAND PALLADIUM  PATHE MARCONI PATHE CINEMA PENTAX PENNY  PERDIO PHILCO  PHONOLA PILOT PORTLAND PROFEX PROFITRONIC PROLINE PROSCAN PROTEC PULSAR	2037, 2042, 2077 2086, 2087, 2088 2001, 2017, 2034 2035 2005, 2017, 2021 2034 2021 2016 2022 2015, 2017, 2018 2020, 2022, 2057 2001 2015, 2018, 2052 2078 2035 2017 2011 2066 2057 2001 2032 2034 2019	SHINTOM SHOGUN SHORAI SIEMENS  SILVA SINGER SINUDYNE SOLAVOX SONOLOR SONTEC STS SUNKAI SUNSTAR SUNTRONIC SYLVANIA  SYMHONIC TASHIKO TATUNG TEAC	2034, 2037 2057 2004 2003, 2005, 2010 2017, 2030, 2035 2037, 2048 2017 2024, 2034 2004, 2035 2011 2025 2017 2022 2070 2001 2001, 2015, 2023 2035 2001 2001, 2021, 2035 2001, 2021, 2035 2001, 2021	AMSTRAD  ANKARO  ANTTRON ARMSTRONG ASTRA ASTRO AVALON AXIS BT BEKO BEST BLAUPUNKT BOCA BRAIN WAVE BRITISH SKY BROA BUSH CNT CAMBRIDGE CANAL SATELLITE CANAL+ CHANNEL MASTER	4003, 4016, 4025 4038, 4039, 4042 4013, 4019, 4030 4044 4009, 4034 4005 4008, 4039, 4045 4031 4030, 4046 4053 4010 4008 4015, 4043 4022 DCASTING 4058 4002 4045 4059 4059 4059
OSAKI OTTO VERSAND PALLADIUM  PATHE MARCONI PATHE CINEMA PENTAX PENNY  PERDIO PHILCO  PHONOLA PILOT PORTLAND PROFEX PROFITRONIC PROLINE PROSCAN PROTEC	2037, 2042, 2077 2086, 2087, 2088 2001, 2017, 2034 2035 2005, 2017, 2021 2034 2021 2016 2022 2015, 2017, 2018 2020, 2022, 2057 2001 2015, 2018, 2052 2078 2035 2017 2011 2066 2057 2001 2032 2034	SHINTOM SHOGUN SHORAI SIEMENS  SILVA SINGER SINUDYNE SOLAVOX SONOLOR SONTEC STS SUNKAI SUNSTAR SUNSTAR SUNTRONIC SYLVANIA  SYMHONIC TASHIKO TATUNG TEAC TEC	2034, 2037 2057 2004 2003, 2005, 2010 2017, 2030, 2035 2037, 2048 2017 2024, 2034 2004, 2035 2011 2025 2017 2022 2070 2001 2001, 2015, 2023 2035 2001 2001, 2021, 2035 2001, 2021, 2035 2001, 2021	AMSTRAD  ANKARO  ANTTRON ARMSTRONG ASTRA ASTRO AVALON AXIS BT BEKO BEST BLAUPUNKT BOCA BRAIN WAVE BRITISH SKY BROA BUSH CNT CAMBRIDGE CANAL SATELLITE CANAL+ CHANNEL MASTER COMLINK	4003, 4016, 4025 4038, 4039, 4042 4013, 4019, 4030 4044 4009, 4034 4015 4008, 4039, 4045 4031 4030, 4046 4053 4010 4030 4008 4015, 4043 4022 DCASTING 4058 4002 4045 4059 4029 4019
OSAKI OTTO VERSAND PALLADIUM  PATHE MARCONI PATHE CINEMA PENTAX PENNY  PERDIO PHILCO  PHONOLA PILOT PORTLAND PROFEX PROFITRONIC PROLINE PROSCAN PROTEC PULSAR PYE	2037, 2042, 2077 2086, 2087, 2088 2001, 2017, 2034 2035 2005, 2017, 2021 2034 2021 2016 2022 2015, 2017, 2018 2020, 2022, 2057 2001 2015, 2018, 2052 2078 2035 2017 2011 2066 2057 2001 2032 2034 2019 2035	SHINTOM SHOGUN SHORAI SIEMENS  SILVA SINGER SINUDYNE SOLAVOX SONOLOR SONTEC STS SUNKAI SUNSTAR SUNTRONIC SYLVANIA  SYMHONIC TASHIKO TATUNG TEAC	2034, 2037 2057 2004 2003, 2005, 2010 2017, 2030, 2035 2037, 2048 2017 2024, 2034 2004, 2035 2011 2025 2017 2022 2070 2001 2001 2001, 2015, 2023 2035 2001 2001 2001, 2021, 2035 2001, 2021 2001, 2021 2011 2015, 2042, 2054 2001, 2015, 2007	AMSTRAD  ANKARO  ANTTRON ARMSTRONG ASTRA ASTRO AVALON AXIS BT BEKO BEST BLAUPUNKT BOCA BRAIN WAVE BRITISH SKY BROA BUSH CNT CAMBRIDGE CANAL SATELLITE CANAL+ CHANNEL MASTER	4003, 4016, 4025 4038, 4039, 4042 4013, 4019, 4030 4044 4009, 4034 4015 4008, 4039, 4045 4031 4030, 4046 4053 4010 4030 4008 4015, 4043 4022 DCASTING 4058 4002 4045 4024 4059 4059 4019 4031
OSAKI OTTO VERSAND PALLADIUM  PATHE MARCONI PATHE CINEMA PENTAX PENNY  PERDIO PHILCO  PHONOLA PILOT PORTLAND PROFEX PROFITRONIC PROLINE PROSCAN PROTEC PULSAR	2037, 2042, 2077 2086, 2087, 2088 2001, 2017, 2034 2035 2005, 2017, 2021 2034 2021 2016 2022 2015, 2017, 2018 2020, 2022, 2057 2001 2015, 2018, 2052 2078 2035 2017 2011 2066 2057 2001 2032 2034 2019	SHINTOM SHOGUN SHORAI SIEMENS  SILVA SINGER SINUDYNE SOLAVOX SONOLOR SONTEC STS SUNKAI SUNSTAR SUNTRONIC SYLVANIA  SYMHONIC TASHIKO TATUNG TEAC TEC TEC TECHNICS TEKNIKA	2034, 2037 2057 2004 2003, 2005, 2010 2017, 2030, 2035 2037, 2048 2017 2024, 2034 2004, 2035 2011 2025 2017 2022 2070 2001 2001 2001, 2015, 2023 2035 2001 2001 2001, 2021, 2035 2001, 2021 2011 2011 2015, 2042, 2054 2001, 2015, 2007 2017, 2028	AMSTRAD  ANKARO  ANTTRON ARMSTRONG ASTRA ASTRO AVALON AXIS BT BEKO BEST BLAUPUNKT BOCA BRAIN WAVE BRITISH SKY BROA BUSH CNT CAMBRIDGE CANAL SATELLITE CANAL+ CHANNEL MASTER COMLINK	4003, 4016, 4025 4038, 4039, 4042 4013, 4019, 4030 4044 4009, 4034 4015 4008, 4039, 4045 4031 4030, 4046 4053 4010 4030 4008 4015, 4043 4022 DCASTING 4058 4002 4045 4059 4029 4019
OSAKI OTTO VERSAND PALLADIUM  PATHE MARCONI PATHE CINEMA PENTAX PENNY  PERDIO PHILCO  PHONOLA PILOT PORTLAND PROFEX PROFITRONIC PROLINE PROSCAN PROTEC PULSAR PYE	2037, 2042, 2077 2086, 2087, 2088 2001, 2017, 2034 2035 2005, 2017, 2021 2034 2021 2016 2022 2015, 2017, 2018 2020, 2022, 2057 2001 2015, 2018, 2052 2078 2035 2017 2011 2066 2057 2001 2032 2034 2019 2035	SHINTOM SHOGUN SHORAI SIEMENS  SILVA SINGER SINUDYNE SOLAVOX SONOLOR SONTEC STS SUNKAI SUNSTAR SUNSTAR SUNTRONIC SYLVANIA  SYMHONIC TASHIKO TATUNG TEAC TEC	2034, 2037 2057 2004 2003, 2005, 2010 2017, 2030, 2035 2037, 2048 2017 2024, 2034 2004, 2035 2011 2025 2017 2022 2070 2001 2001 2001, 2015, 2023 2035 2001 2001 2001, 2021, 2035 2001, 2021 2001, 2021 2011 2015, 2042, 2054 2001, 2015, 2007	AMSTRAD  ANKARO  ANTTRON ARMSTRONG ASTRA ASTRO AVALON AXIS BT BEKO BEST BLAUPUNKT BOCA BRAIN WAVE BRITISH SKY BROA BUSH CNT CAMBRIDGE CANAL SATELLITE CANAL+ CHANNEL MASTER COMLINK CONNEXIONS CROWN	4003, 4016, 4025 4038, 4039, 4042 4013, 4019, 4030 4044 4009, 4034 4015 4008, 4039, 4045 4031 4030, 4046 4053 4010 4030 4008 4015, 4043 4022 DCASTING 4058 4002 4045 4024 4059 4059 4019 4031 4031 4015
OSAKI OTTO VERSAND PALLADIUM  PATHE MARCONI PATHE CINEMA PENTAX PENNY  PERDIO PHILCO  PHONOLA PILOT PORTLAND PROFEX PROFITRONIC PROLINE PROSCAN PROTEC PULSAR PYE  QUARTER QUARTZ	2037, 2042, 2077 2086, 2087, 2088 2001, 2017, 2034 2035 2005, 2017, 2021 2034 2021 2016 2022 2015, 2017, 2018 2020, 2022, 2057 2001 2015, 2018, 2052 2078 2035 2017 2011 2066 2057 2001 2032 2034 2019 2035 2025 2025	SHINTOM SHOGUN SHORAI SIEMENS  SILVA SINGER SINUDYNE SOLAVOX SONOLOR SONTEC STS SUNKAI SUNSTAR SUNTRONIC SYLVANIA  SYMHONIC TASHIKO TATUNG TEAC TEC TEC TECHNICS TEKNIKA	2034, 2037 2057 2004 2003, 2005, 2010 2017, 2030, 2035 2037, 2048 2017 2024, 2034 2004, 2035 2011 2025 2017 2022 2070 2001 2001 2001, 2015, 2023 2035 2001 2001 2001, 2021, 2035 2001, 2021 2011 2011 2015, 2042, 2054 2001, 2015, 2007 2017, 2028	AMSTRAD  ANKARO  ANTTRON ARMSTRONG ASTRA ASTRO AVALON AXIS BT BEKO BEST BLAUPUNKT BOCA BRAIN WAVE BRITISH SKY BROA BUSH CNT CAMBRIDGE CANAL SATELLITE CANAL+ CHANNEL MASTER COMLINK CONNEXIONS CROWN CYRUS	4003, 4016, 4025 4038, 4039, 4042 4013, 4019, 4030 4044 4009, 4034 4015 4008, 4039, 4045 4031 4030, 4046 4053 4010 4030 4008 4015, 4043 4022 DCASTING 4059 4059 4029 4019 4031 4015 4011
OSAKI OTTO VERSAND PALLADIUM  PATHE MARCONI PATHE CINEMA PENTAX PENNY  PERDIO PHILCO  PHONOLA PILOT PORTLAND PROFEX PROFITRONIC PROLINE PROSCAN PROTEC PULSAR PYE  QUARTER QUARTER QUASAR	2037, 2042, 2077 2086, 2087, 2088 2001, 2017, 2034 2035 2005, 2017, 2021 2034 2021 2016 2022 2015, 2017, 2018 2020, 2022, 2057 2001 2015, 2018, 2052 2078 2035 2017 2011 2066 2057 2001 2032 2034 2019 2035 2025 2025 2015, 2042, 2087	SHINTOM SHOGUN SHORAI SIEMENS  SILVA SINGER SINUDYNE SOLAVOX SONOLOR SONTEC STS SUNKAI SUNSTAR SUNTRONIC SYLVANIA  SYMHONIC TASHIKO TATUNG TEAC TEC TEC TEC TECHNICS TEKNIKA  TELEAVIA	2034, 2037 2057 2004 2003, 2005, 2010 2017, 2030, 2035 2037, 2048 2017 2024, 2034 2004, 2035 2011 2025 2017 2022 2070 2001 2001 2001, 2015, 2023 2035 2001 2001, 2021, 2035 2001, 2021 2011 2015, 2042, 2054 2001, 2015, 2028 2021 2021, 2047, 2058	AMSTRAD  ANKARO  ANTTRON ARMSTRONG ASTRA ASTRO AVALON AXIS BT BEKO BEST BLAUPUNKT BOCA BRAIN WAVE BRITISH SKY BROA BUSH CNT CAMBRIDGE CANAL SATELLITE CANAL+ CHANNEL MASTER COMLINK CONNEXIONS CROWN CYRUS D-BOX	4003, 4016, 4025 4038, 4039, 4042 4013, 4019, 4030 4044 4009, 4034 4015 4008, 4039, 4045 4031 4030, 4046 4053 4010 4030 4008 4015, 4043 4022 DCASTING 4058 4002 4045 4024 4059 4059 4029 4019 4031 4015 4011 4054
OSAKI OTTO VERSAND PALLADIUM  PATHE MARCONI PATHE CINEMA PENTAX PENNY  PERDIO PHILCO  PHONOLA PILOT PORTLAND PROFEX PROFITRONIC PROLINE PROSCAN PROTEC PULSAR PYE  QUARTER QUARTER QUELLE	2037, 2042, 2077 2086, 2087, 2088 2001, 2017, 2034 2035 2005, 2017, 2021 2034 2021 2016 2022 2015, 2017, 2018 2020, 2022, 2057 2001 2015, 2018, 2052 2078 2035 2017 2011 2066 2057 2001 2032 2034 2019 2035 2025 2025 2015, 2042, 2087 2035	SHINTOM SHOGUN SHORAI SIEMENS  SILVA SINGER SINUDYNE SOLAVOX SONOLOR SONTEC STS SUNKAI SUNSTAR SUNTRONIC TASHIKO TATUNG TEAC TEC TEC TECHNICS TEKNIKA  TELEAVIA TELEFUNKEN	2034, 2037 2057 2004 2003, 2005, 2010 2017, 2030, 2035 2037, 2048 2017 2024, 2034 2004, 2035 2011 2025 2017 2022 2070 2001 2001 2001, 2015, 2023 2035 2001 2001, 2021, 2035 2001, 2021 2011 2015, 2042, 2054 2001, 2015, 2027 2017, 2028 2021 2021 2021, 2047, 2058 2064, 2074	AMSTRAD  ANKARO  ANTTRON ARMSTRONG ASTRA ASTRO AVALON AXIS BT BEKO BEST BLAUPUNKT BOCA BRAIN WAVE BRITISH SKY BROA BUSH CNT CAMBRIDGE CANAL SATELLITE CANAL+ CHANNEL MASTER COMLINK CONNEXIONS CROWN CYRUS D-BOX DDC	4003, 4016, 4025 4038, 4039, 4042 4013, 4019, 4030 4044 4009, 4034 4015 4005 4008, 4039, 4045 4031 4030, 4046 4053 4010 4030 4008 4015, 4043 4002 DCASTING 4059 4059 40029 4019 4031 4015 4011 4054 4029
OSAKI OTTO VERSAND PALLADIUM  PATHE MARCONI PATHE CINEMA PENTAX PENNY  PERDIO PHILCO  PHONOLA PILOT PORTLAND PROFEX PROFITRONIC PROLINE PROSCAN PROTEC PULSAR PYE  QUARTER QUARTER QUARTZ QUASAR QUELLE RADIO SHACK	2037, 2042, 2077 2086, 2087, 2088 2001, 2017, 2034 2035 2005, 2017, 2021 2016 2022 2015, 2017, 2018 2020, 2022, 2057 2001 2015, 2018, 2052 2078 2035 2017 2011 2066 2057 2001 2032 2034 2019 2035 2025 2025 2015, 2042, 2087 2035 2001, 2085	SHINTOM SHOGUN SHORAI SIEMENS  SILVA SINGER SINUDYNE SOLAVOX SONOLOR SONTEC STS SUNKAI SUNSTAR SUNTRONIC SYLVANIA  SYMHONIC TASHIKO TATUNG TEAC TEC TECHNICS TEKNIKA  TELEAVIA TELEFUNKEN TENOSAL	2034, 2037 2057 2004 2003, 2005, 2010 2017, 2030, 2035 2037, 2048 2017 2024, 2034 2004, 2035 2011 2025 2017 2022 2070 2001 2001 2001, 2015, 2023 2035 2001 2001, 2021, 2035 2001 2001, 2021, 2035 2001, 2021 2011 2015, 2042, 2054 2001, 2015, 2007 2017, 2028 2021 2021, 2047, 2058 2064, 2074 2034	AMSTRAD  ANKARO  ANTTRON ARMSTRONG ASTRA ASTRO AVALON AXIS BT BEKO BEST BLAUPUNKT BOCA BRAIN WAVE BRITISH SKY BROA BUSH CNT CAMBRIDGE CANAL SATELLITE CANAL+ CHANNEL MASTER COMLINK CONNEXIONS CROWN CYRUS D-BOX DDC DNT	4003, 4016, 4025 4038, 4039, 4042 4013, 4019, 4030 4044 4009, 4034 4005 4008, 4039, 4045 4031 4030, 4046 4053 4010 4008 4015, 4043 4022 DCASTING 4058 4002 4045 4024 4059 4059 4059 4059 4011 4051 4011 4054 4029 4011, 4031
OSAKI OTTO VERSAND PALLADIUM  PATHE MARCONI PATHE CINEMA PENTAX PENNY  PERDIO PHILCO  PHONOLA PILOT PORTLAND PROFEX PROFITRONIC PROLINE PROSCAN PROTEC PULSAR PYE  QUARTER QUARTZ QUARTZ QUASAR QUELLE RADIO SHACK RADIOLA	2037, 2042, 2077 2086, 2087, 2088 2001, 2017, 2034 2035 2005, 2017, 2021 2034 2021 2016 2022 2015, 2017, 2018 2020, 2022, 2057 2001 2015, 2018, 2052 2078 2035 2017 2011 2066 2057 2001 2032 2034 2019 2035 2025 2025 2015, 2042, 2087 2035 2001, 2085 2001, 2085 2035	SHINTOM SHOGUN SHORAI SIEMENS  SILVA SINGER SINUDYNE SOLAVOX SONOLOR SONTEC STS SUNKAI SUNSTAR SUNTRONIC SYLVANIA  SYMHONIC TASHIKO TATUNG TEAC TEC TECHNICS TEKNIKA  TELEAVIA TELEFUNKEN  TENOSAL TENSAI	2034, 2037 2057 2004 2003, 2005, 2010 2017, 2030, 2035 2037, 2048 2017 2024, 2034 2004, 2035 2011 2025 2017 2022 2070 2001 2001 2001, 2015, 2023 2035 2001 2001 2001, 2021, 2035 2001, 2021 2011 2015, 2042, 2054 2001, 2015, 2007 2017, 2028 2021 2021 2021 2011 2015, 2042, 2054 2001, 2015, 2007 2017, 2028 2021 2021 2021 2021 2021 2034 2042, 2058 2064, 2074 2034 2001, 2066	AMSTRAD  ANKARO  ANTTRON ARMSTRONG ASTRA ASTRO AVALON AXIS BT BEKO BEST BLAUPUNKT BOCA BRAIN WAVE BRITISH SKY BROA BUSH CNT CAMBRIDGE CANAL SATELLITE CANAL SATELLITE COMLINK CONNEXIONS CROWN CYRUS D-BOX DDC DNT ECHOSTAR	4003, 4016, 4025 4038, 4039, 4042 4013, 4019, 4030 4044 4009, 4034 4005 4008, 4039, 4045 4031 4030, 4046 4053 4010 4030 4008 4015, 4043 4022 DCASTING 4058 4002 4045 4024 4059 4059 4059 4029 4011 4051 4015 4011 4054 4029 4011, 4031 4031, 4036, 4061
OSAKI OTTO VERSAND PALLADIUM  PATHE MARCONI PATHE CINEMA PENTAX PENNY  PERDIO PHILCO  PHONOLA PILOT PORTLAND PROFEX PROFITRONIC PROLINE PROSCAN PROTEC PULSAR PYE  QUARTER QUARTER QUARTER QUASAR QUELLE RADIO SHACK RADIOLA RADIX	2037, 2042, 2077 2086, 2087, 2088 2001, 2017, 2034 2035 2005, 2017, 2021 2034 2021 2016 2022 2015, 2017, 2018 2020, 2022, 2057 2001 2015, 2018, 2052 2078 2035 2017 2011 2066 2057 2001 2032 2034 2019 2035 2025 2025 2015, 2042, 2087 2035 2017 2011	SHINTOM SHOGUN SHORAI SIEMENS  SILVA SINGER SINUDYNE SOLAVOX SONOLOR SONTEC STS SUNKAI SUNSTAR SUNTRONIC TASHIKO TATUNG TEAC TEC TECHNICS TEKNIKA  TELEAVIA TELEAVIA TELEFUNKEN  TENOSAL TENSAI THOMAS	2034, 2037 2057 2004 2003, 2005, 2010 2017, 2030, 2035 2037, 2048 2017 2024, 2034 2004, 2035 2011 2025 2017 2022 2070 2001 2001 2001, 2015, 2023 2035 2001 2001 2001, 2021, 2035 2001, 2021 2011 2015, 2042, 2054 2001, 2015, 2007 2017, 2028 2021 2021 2021 2021 2021 2034 2034 2001, 2066 2001	AMSTRAD  ANKARO  ANTTRON ARMSTRONG ASTRA ASTRO AVALON AXIS BT BEKO BEST BLAUPUNKT BOCA BRAIN WAVE BRITISH SKY BROA BUSH CNT CAMBRIDGE CANAL SATELLITE CANAL SATELLITE COMLINK CONNEXIONS CROWN CYRUS D-BOX DDC DNT ECHOSTAR EMANON	4003, 4016, 4025 4038, 4039, 4042 4013, 4019, 4030 4044 4009, 4034 4015 4008, 4039, 4045 4053 4010 4030 4008 4015, 4043 4022 DCASTING 4058 4002 4045 4024 4059 4019 4031 4015 4011 4054 4029 4011 4031 4031 4031 4031 4031 4031
OSAKI OTTO VERSAND PALLADIUM  PATHE MARCONI PATHE CINEMA PENTAX PENNY  PERDIO PHILCO  PHONOLA PILOT PORTLAND PROFEX PROFITRONIC PROLINE PROSCAN PROTEC PULSAR PYE  QUARTER QUARTZ QUASAR QUELLE RADIO SHACK RADIOLA RADIX RANDEX	2037, 2042, 2077 2086, 2087, 2088 2001, 2017, 2034 2035 2005, 2017, 2021 2034 2021 2016 2022 2015, 2017, 2018 2020, 2022, 2057 2001 2015, 2018, 2052 2078 2035 2017 2011 2066 2057 2001 2032 2034 2019 2035 2025 2025 2015, 2042, 2087 2035 2017, 2085 20017 2017	SHINTOM SHOGUN SHORAI SIEMENS  SILVA SINGER SINUDYNE SOLAVOX SONOLOR SONTEC STS SUNKAI SUNSTAR SUNTRONIC TASHIKO TATUNG TEAC TEC TEC TECHNICS TEKNIKA  TELEAVIA TELEAVIA TELEFUNKEN  TENOSAL TENSAI THOMAS THORN	2034, 2037 2057 2004 2003, 2005, 2010 2017, 2030, 2035 2037, 2048 2017 2024, 2034 2004, 2035 2011 2025 2017 2022 2070 2001 2001 2001, 2015, 2023 2035 2001 2001 2001, 2021, 2035 2001, 2021 2011 2015, 2042, 2054 2001, 2015, 2027 2017, 2028 2021 2021 2021, 2047, 2058 2064, 2074 2034 2001, 2066 2001 2016, 2021, 2037	AMSTRAD  ANKARO  ANTTRON ARMSTRONG ASTRA ASTRO AVALON AXIS BT BEKO BEST BLAUPUNKT BOCA BRAIN WAVE BRITISH SKY BROA BUSH CNT CAMBRIDGE CANAL SATELLITE CANAL SATELLITE COMLINK CONNEXIONS CROWN CYRUS D-BOX DDC DNT ECHOSTAR	4003, 4016, 4025 4038, 4039, 4042 4013, 4019, 4030 4044 4009, 4034 4005 4008, 4039, 4045 4031 4030, 4046 4053 4010 4030 4008 4015, 4043 4022 DCASTING 4058 4002 4045 4024 4059 4059 4059 4029 4011 4051 4015 4011 4054 4029 4011, 4031 4031, 4036, 4061
OSAKI OTTO VERSAND PALLADIUM  PATHE MARCONI PATHE CINEMA PENTAX PENNY  PERDIO PHILCO  PHONOLA PILOT PORTLAND PROFEX PROFITRONIC PROLINE PROSCAN PROTEC PULSAR PYE  QUARTER QUARTER QUARTER QUASAR QUELLE RADIO SHACK RADIOLA RADIX	2037, 2042, 2077 2086, 2087, 2088 2001, 2017, 2034 2035 2005, 2017, 2021 2034 2021 2016 2022 2015, 2017, 2018 2020, 2022, 2057 2001 2015, 2018, 2052 2078 2035 2017 2011 2066 2057 2001 2032 2034 2019 2035 2025 2025 2015, 2042, 2087 2035 2017 2011	SHINTOM SHOGUN SHORAI SIEMENS  SILVA SINGER SINUDYNE SOLAVOX SONOLOR SONTEC STS SUNKAI SUNSTAR SUNTRONIC TASHIKO TATUNG TEAC TEC TEC TEC TECHNICS TEKNIKA  TELEAVIA TELEFUNKEN  TENOSAL TENSAI THOMAS THORN TMK	2034, 2037 2057 2004 2003, 2005, 2010 2017, 2030, 2035 2037, 2048 2017 2024, 2034 2004, 2035 2011 2025 2017 2022 2070 2001 2001 2001, 2015, 2023 2035 2001 2001 2001, 2021, 2035 2001, 2021 2015, 2042, 2054 2001, 2015, 2027 2017, 2028 2021 2021, 2047, 2058 2064, 2074 2034 2001, 2066 2001 2016, 2021, 2037 2051, 2057	AMSTRAD  ANKARO  ANTTRON ARMSTRONG ASTRA ASTRO AVALON AXIS BT BEKO BEST BLAUPUNKT BOCA BRAIN WAVE BRITISH SKY BROA BUSH CNT CAMBRIDGE CANAL SATELLITE CANAL SATELLITE COMLINK CONNEXIONS CROWN CYRUS D-BOX DDC DNT ECHOSTAR EMANON	4003, 4016, 4025 4038, 4039, 4042 4013, 4019, 4030 4044 4009, 4034 4015 4008, 4039, 4045 4053 4010 4030 4008 4015, 4043 4022 DCASTING 4058 4002 4045 4024 4059 4019 4031 4015 4011 4054 4029 4011 4031 4031 4031 4031 4031 4031
OSAKI OTTO VERSAND PALLADIUM  PATHE MARCONI PATHE CINEMA PENTAX PENNY  PERDIO PHILCO  PHONOLA PILOT PORTLAND PROFEX PROFITRONIC PROLINE PROSCAN PROTEC PULSAR PYE  QUARTER QUARTZ QUASAR QUELLE RADIO SHACK RADIOLA RADIX RANDEX	2037, 2042, 2077 2086, 2087, 2088 2001, 2017, 2034 2035 2005, 2017, 2021 2034 2021 2016 2022 2015, 2017, 2018 2020, 2022, 2057 2001 2015, 2018, 2052 2078 2035 2017 2011 2066 2057 2001 2032 2034 2019 2035 2025 2025 2015, 2042, 2087 2035 2017, 2085 20017 2017	SHINTOM SHOGUN SHORAI SIEMENS  SILVA SINGER SINUDYNE SOLAVOX SONOLOR SONTEC STS SUNKAI SUNSTAR SUNTRONIC TASHIKO TATUNG TEAC TEC TEC TECHNICS TEKNIKA  TELEAVIA TELEAVIA TELEFUNKEN  TENOSAL TENSAI THOMAS THORN	2034, 2037 2057 2004 2003, 2005, 2010 2017, 2030, 2035 2037, 2048 2017 2024, 2034 2004, 2035 2011 2025 2017 2022 2070 2001 2001 2001, 2015, 2023 2035 2001 2001 2001, 2021, 2035 2001, 2021 2011 2015, 2042, 2054 2001, 2015, 2027 2017, 2028 2021 2021 2021, 2047, 2058 2064, 2074 2034 2001, 2066 2001 2016, 2021, 2037	AMSTRAD  ANKARO  ANTTRON ARMSTRONG ASTRA ASTRO AVALON AXIS BT BEKO BEST BLAUPUNKT BOCA BRAIN WAVE BRITISH SKY BROA BUSH CNT CAMBRIDGE CANAL SATELLITE CANAL+ CHANNEL MASTER COMLINK CONNEXIONS CROWN CYRUS D-BOX DDC DNT ECHOSTAR EMANON FTE HUMAX	4003, 4016, 4025 4038, 4039, 4042 4013, 4019, 4030 4044 4009, 4034 4015 4008, 4039, 4045 4031 4030, 4046 4053 4010 4030 4008 4015, 4043 4022 DCASTING 4058 4002 4045 4024 4059 4029 4019 4031 4015 4011 4054 4029 4011, 4031 4034 4060 4002, 4009, 4010
OSAKI OTTO VERSAND PALLADIUM  PATHE MARCONI PATHE CINEMA PENTAX PENNY  PERDIO PHILCO  PHONOLA PILOT PORTLAND PROFEX PROFITRONIC PROLINE PROSCAN PROTEC PULSAR PYE  QUARTER QUARTZ QUASAR QUELLE RADIO SHACK RADIOLA RADIX RANDEX	2037, 2042, 2077 2086, 2087, 2088 2001, 2017, 2034 2035 2005, 2017, 2021 2034 2021 2016 2022 2015, 2017, 2018 2020, 2022, 2057 2001 2015, 2018, 2052 2078 2035 2017 2011 2066 2057 2001 2032 2034 2019 2035 2025 2015, 2042, 2087 2035 2017, 2085 2007 2017 2017 2017 2017 2015, 2022, 2027	SHINTOM SHOGUN SHORAI SIEMENS  SILVA SINGER SINUDYNE SOLAVOX SONOLOR SONTEC STS SUNKAI SUNSTAR SUNTRONIC TASHIKO TATUNG TEAC TEC TEC TEC TECHNICS TEKNIKA  TELEAVIA TELEFUNKEN  TENOSAL TENSAI THOMAS THORN TMK	2034, 2037 2057 2004 2003, 2005, 2010 2017, 2030, 2035 2037, 2048 2017 2024, 2034 2004, 2035 2011 2025 2017 2022 2070 2001 2001 2001, 2015, 2023 2035 2001 2001 2001, 2021, 2035 2001, 2021 2015, 2042, 2054 2001, 2015, 2027 2017, 2028 2021 2021, 2047, 2058 2064, 2074 2034 2001, 2066 2001 2016, 2021, 2037 2051, 2057	AMSTRAD  ANKARO  ANTTRON ARMSTRONG ASTRA ASTRO AVALON AXIS BT BEKO BEST BLAUPUNKT BOCA BRAIN WAVE BRITISH SKY BROA BUSH CNT CAMBRIDGE CANAL SATELLITE CANAL+ CHANNEL MASTER COMLINK CONNEXIONS CROWN CYRUS D-BOX DDC DNT ECHOSTAR EMANON FTE HUMAX	4003, 4016, 4025 4038, 4039, 4042 4013, 4019, 4030 4044 4009, 4034 4015 4008, 4039, 4045 4053 4010 4030 4008 4015, 4043 4022 DCASTING 4058 4002 4045 4024 4059 4019 4031 4015 4011 4054 4029 4011 4054 4029 4011 4054 4029 4011 4054 4029 4011 4054 4029 4011 4054 4029 4011 4054 4029 4011 4054 4029 4011 4054 4029 4011 4054 4029 4011 4054 4029 4011 4031 4031 4031 4031 4031 4031 4034

FINLUX	4005, 4024, 4032 4037
FRACARRO	4061
FREECOM	4034
FUBE G-SAT	4030, 4031, 4034 4009
GALAXIS	4019, 4057, 4060
GENERAL INSTRUM	
GOLD BOX	4059
GOODING GOODMANS	4048 4010
GRUNDIG	4008, 4010, 4048
HINARI HIRSCHMANN	4009 4008, 4032, 4039
HINSCHIVIAININ	4040, 4049
HITACHI	4037
HOUSTON HUTH	4053 4013, 4015, 4019
потп	4013, 4013, 4019
ITT	4005
INVIDEO INTERVISION	4061
JVC	4050 4048
JOHANSSON	4022
KATHREIN	4004, 4006, 4008 4011, 4035, 4041
KREISELMEYER	4008
KYOSTAR	4034
LA SAT LENCO	4043, 4045
LENNOX	4034 4050
LUPUS	4030
LUXOR MANHATTAN	4005, 4049 4037, 4045, 4050
MARANTZ	4011
MASPR0	4004, 4023
MATSUI MEDIASAT	4024, 4048 4059
MEDIAMARKT	4015
MINERVA	4048
MORGAN'S NAVEX	4015, 4043 4022
NEUHAUS	4039
NEUSAT NEWHAUS	4057
NIKKO	4013 4028
NOKIA	4005, 4032, 4037
NORDMENDE	4049, 4054, 4063
ORBITECH	4029 4039
OXFORD	4024
PACE	4002, 4009, 4014 4023, 4037, 4055
	4058
PALLADIUM	4048
PALSAT PANDA	4039 4037
PHILIPS	4007, 4011, 4020
DUONOTREND	4037, 4048, 4059
PHONOTREND PIONEER	4019, 4050 4021, 4059
PLANET	4061
PROMAX	4037
PROSAT QUADRAL	4019 4029, 4044
RADIOLA	4011
RADIX	4031, 4064
RFT SAT	4011, 4013, 4019 4027, 4038
SABA	4023, 4045
SABRE	4037

CABLE TV	TV (TVC)
ZEHNDER	4033, 4045, 4047
XCOM MULTIMEDIA	
XSAT	4006, 4065
	4037
WISI	4008, 4027, 4031
WINERSAT	4022
VTECH	4027
VORTEC	4034
VENTANA	4011
UNIVERSUM	4008, 4049
UNITOR	4022
TRIASAT	4040
TRIAD	4027
TONNA	4037, 4059 4026, 4053
TELESAT THOMSON	4051
TELEKA	4015, 4052
TELEFUNKEN	4034
TECHNILAND	4026
TECHNISAT	4001, 4039
TANTEC	4023, 4037
TPS	4056
SUNSTAR	4043
STRONG	4062
SONY	4017, 4018
SKYMASTER	4019, 4044, 4051
SIEMENS	4008
SEG	4030, 4034
SEEMANN	4031, 4046
SCHWAIGER	4009, 4041
	4045
SATPARTNER	4022, 4034, 4040
SATMASTER	4026
SATEC	4009
SATCOM	4026, 4051
SALORA	4005
SAGEM	4056





Manufacturer	Code
ABC	3002, 3003, 3004
	3006, 3008
ANDOVER	3037
BELL & HOWELL	3006
<b>BIRGMINGHAM CA</b>	BLE
COMMUNICATION	J 3020
BRITISH TELECOM	3002, 3012
CABLETIME	3016, 3019, 3025
	3029
CONTEC	3009
CLYDE	3011
CRYPTOVISION	3038
DAEHAN	3043
DAERYUNG	3003
DECSAT	3027
EVERQUESST	3007
FILMNET	3028
FRANCE TELECOM	3030
GEC	3011
GEMINI	3007
GENERAL INSTRUM	IENT 3004, 3020
	3031, 3046
GOLDSTAR	3014, 3047
GRUNDIG	3035
HITACHI	3004
JASC0	3007
JERROLD	3002, 3004, 3005
	3006, 3007, 3020
	3031, 3046
LC ALDO	2044

3044

LG ALPS

MEMOREX	3001
MNET	3009, 3028
NOW	3041
OAK	3009
PACIFIC PANASONIC	3039 3001, 3013
PARAGON	3001, 3013
PULSAR	3001
PVP STEREO VISUA	
MATRIX	3002
PIONEER	3010, 3014, 3018
	3036
QUASAR	3001
RADIO SHACK	3007
REMBRANDT	3004
RUNCO	3001
SAMSUNG	3014, 3040
SATBOX	3024
SIGNAL	3007
SIGNATURE	3004
STS	3015
SALORA	3026
SCIENTIFIC SCIENTIFIC ATLAN	3003, 3032, 3049
SCIENTIFIC ATLAN	3021
SEAW00	3045
STARCOM	3002, 3007
STARGATE	3007
STARQUEST	3007
TAIHAN	3043
TELESERVICE	3022
TELE+1	3028
TUDI	3023
TUSA	3007
TOCOM	3005
TONGKOOK	3042, 3048
TOSHIBA	3001
UNITED CABLE	
VIDEUWAY	3017
VIDEOWAY VISICABLE+ WESTMINSTER	3033 3012
	3012
WOLSEY GENE ZENITH	3001, 3034
ZLIVIIII	0001, 0004

## **Troubleshooting**

Incorrect operations are often mistaken for trouble and malfunctions. If you think that there is something wrong with this component, check the points below. Sometimes the trouble may lie in another component. Investigate the other components and electrical appliances being used. If the trouble cannot be rectified even after exercising the checks listed below, ask your nearest PIONEER authorized service center or your dealer to carry out repair work.

#### The power does not turn ON.

- Connect the power plug to the wall outlet.
- Disconnect the power plug from the outlet, and insert again.
- Make sure there are no loose strands of speaker wire touching the rear panel. This could cause the receiver to shut off automatically.

## The unit does not respond when the buttons are pressed.

#### No sound is output when a function is selected.

- Make sure the component is connected correctly (refer to pages 6 to 15).
- Press **MUTING** on the remote control.
- Adjust MASTER VOLUME.
- Press the **MONITOR** button.
- Press SPEAKERS to select the speakers you connected.

#### No image is output when a function is selected.

- Make sure the component is connected correctly (refer to pages 6 to 15).
- Press the correct function button.

#### Considerable noise in radio broadcasts.

- Tune in the correct frequency.
- Connect the antenna (refer to page 11).
- Route DD RF and digital cables away from the antenna terminals and wires.
- Fully extend the FM wire antenna, position for best reception, and secure to a wall.
- Connect an outdoor FM antenna (refer to page 11).
- · Adjust the direction and position for best reception.
- Connect an additional internal or external AM antenna (refer to page 11).
- Turn off the equipment causing the noise or move it away from the receiver.
- Place the antenna farther away from the equipment causing the noise.

#### Broadcast stations cannot be selected automatically.

• Connect an outdoor antenna (refer to page 11).

#### No sound from surround or center speakers.

- Refer to "SPEAKERS setting mode" on page 17 to check the speaker settings.
- Refer to "Setting the volume level of each channel" on page 21 to check the speaker levels.
- Connect the speakers (refer to page 12,13).
- Make sure that both A and B sets of speakers are not switched on at the same time (A+B setting).

# Sound is produced from other components, but not from LD or DVD player.

- Set SIGNAL SELECT to "DIGITAL" or "ANALOG" according to the type of connections made (refer to page 29)
- Set the digital input settings correctly (refer to pages 20-21).
- Make digital connections (refer to page 6-7) and set SIGNAL SELECT to "DIGITAL" (refer to page 29).
- Refer to the instruction manual supplied with the DVD player.

## No audio is output when software with DTS is played back.

 Make sure your DVD is digitally connected to this receiver (refer to page 6-7) and set the SIGNAL SELECT to "DIGITAL".

## When a search is performed by a DTS compatible CD player during playback, noise is output.

 This is not a malfunction, but be sure to turn the volume down to prevent the output of loud noise from your speakers.

#### Cannot be remote controlled.

- Replace the batteries (refer to page 4).
- Operate within 23 feet (7 m), 30° of the remote sensor on the front panel (refer to page 4).
- Remove the obstacle or operate from another position.
- Avoid exposing the remote sensor on the front panel to direct light.

#### The display is dark or off.

 Press FL DIMMER on the remote control repeatedly to return to the default.

If the unit does not operate normally due to external effects such as static electricity.

Disconnect the power plug from the outlet and insert again to return to normal operating conditions.

## **Specifications**

Amplifier Section	FM Tuner Section
Continuous average power output of 100 watts	Frequency Range87.5 MHz to 108 MHz
(VSX-D850S is 110 watts)* per channel, min.,	Usable Sensitivity
at 8 ohms, from 20 Hz to 20,000 Hz with no	Mono:13.2 dBf, IHF (1.3 $\mu$ V/ 75 $\Omega$ )
more than 0.2 %** total harmonic distortion	50 dB Quieting SensitivityMono: 20.2 dB
(front).	Stereo: 38.6 dBf
(Holit).	Signal-to-Noise Ratio Mono: 73 dB (at 85 dBf)
	Stereo: 70 dB (at 85 dBf)
Continuous Power Output (VSX-D710S/D810S)	Distortion Stereo: 0.5 % (1 kHz)
Front 100 W per channel (1kHz, 1.0 %, 8 <b>Ω</b> )	Alternate Channel Selectivity
Center 100 W (1kHz, 1.0 %, 8 Ω)	Stereo Separation
Surround 100 W per channel (1kHz, 1.0 %, 8 $\Omega$ )	Frequency Response
Surround Back	•
Continuous Power Output (VSX-D850S)	AM Tuner Section
Front	Frequency Range
Center	Sensitivity (IHF, Loop antenna)
Surround 110 W per channel (1kHz, 1.0 %, 8 $\Omega$ )	Selectivity
Surround Back	Signal-to-Noise Ratio
Juliounu back 110 W (18112, 1.0 %, 0 22)	Antenna Loop antenna
Input (Sensitivity/Impedance)	Miscellaneous
CD, AUX, VCR/DVR, CD-R/TAPE/MD, DVD/LD,	Power Requirements AC 120 V, 60 Hz
TV/SAT, VIDEO	Power Consumption
	VSX-D710S
Frequency Response	350 VA
CD, AUX, VCR/DVR, CD-R/TAPE/MD, DVD/LD,	VSX-D810S
TV/SAT, VIDEO	420 VA
	VSX-D850S
Output (Level/Impedance)	420 VA
VCR/DVR REC, CD-R/TAPE/MD REC	In Standby
	AC Outlet
Tone Control	Dimensions
BASS ± 6 dB (100 Hz) TREBLE ± 6 dB (10 kHz)	(16-9/16 (W) x 6-4/16 (H) x 15-13/16 (D) in.)
LOUDNESS +9 dB (100 Hz/10 kHz)	Weight (without package)
LOODNESS +9 db (100 Hz/10 KHz)	VSX-D710S
	VSX-D810S
Signal-to-Noise Ratio (IHF, short circuited, A network)	V3A-D0303 10.3 kg (23 lb 3 02)
CD, AUX, VCR/DVR, CD-R/TAPE/MD, DVD/LD, TV/SAT, VIDEO	r din .
96 dB	Furnished Parts
Signal-to Noise Ratio [EIA, at 1 W (1 kHz)]	FM wire Antenna
CD, AUX, VCR/DVR, CD-R/TAPE/MD, DVD/LD,	AM loop Antenna
TV/SAT, VIDEO	Dry Cell Batteries
79 dB	VSX-D710S/D810S : AA Size / IEC R6P
79 db	Remote Control Unit
Video Section	Operating Instructions
Input (Sensitivity/Impedance)	Operating instructions
VCR/DVR, DVD/LD, TV/SAT, VIDEO	NOTE:
1 Vp-p/75 Ω	<ul><li>Specifications and the design are subject to possible</li></ul>
Output (Level/Impedance)	modifications without notice, due to improvements.
VCR/DVR 1 Vp-p/75 $\Omega$	* Measured pursuant to the Federal Trade
Frequency Response	Commission's Trade Regulation rule on Power Output
VCR/DVR, DVD/LD, TV/SAT, VIDEO → MONITOR	Claims for Amplifiers.
	** Measured by Audio Spectrum Analyzer.
Signal-to-Noise Ratio55 dB	*** VSX-D810S only.
Cross Talk 55 dB	,





### Dear Customer:

Selecting fine audio equipment such as the unit you've just purchased is only the start of your musical enjoyment. Now it's time to consider how you can maximize the fun and excitement your equipment offers. This manufacturer and the Electronic Industries Association's Consumer Electronics Group want you to get the most out of your equipment by playing it at a safe level. One that lets the sound come through loud and clear without annoying blaring or distortion-and, most importantly, without affecting your sensitive hearing.

Sound can be deceiving. Over time your hearing "comfort level" adapts to higher volumes of sound. So what sounds "normal" can actually be loud and harmful to your hearing. Guard against this by setting your equipment at a safe level BEFORE your hearing adapts.

#### To establish a safe level:

- Start your volume control at a low setting.
- Slowly increase the sound until you can hear it comfortably and clearly, and without distortion.

#### Once you have established a comfortable sound level:

Set the dial and leave it there.

Taking a minute to do this now will help to prevent hearing damage or loss in the future. After all, we want you listening for a lifetime.

#### We Want You Listening For A Lifetime

Used wisely, your new sound equipment will provide a lifetime of fun and enjoyment. Since hearing damage from loud noise is often undetectable until it is too late, this manufacturer and the Electronic Industries Association's Consumer Electronics Group recommend you avoid prolonged exposure to excessive noise. This list of sound levels is included for your protection.

#### Decibel

#### Level Example

- 30 Quiet library, soft whispers
- 40 Living room, refrigerator, bedroom away from traffic
- 50 Light traffic, normal conversation, quiet office
- 60 Air conditioner at 20 feet, sewing machine
- 70 Vacuum cleaner, hair dryer, noisy restaurant
- Average city traffic, garbage disposals, alarm clock 80 at two feet.

#### THE FOLLOWING NOISES CAN BE DANGEROUS UNDER CONSTANT EXPOSURE

- 90 Subway, motorcycle, truck traffic, lawn mower
- 100 Garbage truck, chain saw, pneumatic drill
- 120 Rock band concert in front of speakers, thunderclap
- 140 Gunshot blast, jet plane
- 180 Rocket launching pad

Information courtesy of the Deafness Research Foundation.





Should this product require service in the U.S.A. and you wish to locate the nearest Pioneer Authorized Independent Service Company, or if you wish to purchase replacement parts, operating instructions, service manuals, or accessories, please call the number shown below.

800-421-1404

Please do not ship your product to Pioneer without first calling the Customer Service Department at the above listed number for assistance.

> Pioneer Electronics Service, Inc. Customer Service Department P.O. BOX 1760, Long Beach, CA 90801-1760, U.S.A.

For warranty information please see the Limited Warranty sheet included with your product.

Should this product require service in Canada, please contact a Pioneer Canadian Authorized Dealer to locate the nearest Pioneer Authorized Service Company in Canada

Alternatively, please contact the Customer Service Department at the following address:

Pioneer Electronics of Canada, Inc. Customer Service Department 300 Allstate Parkway, Markham, Ontario L3R OP2 (905)479-4411 1(877)283-5901

For warranty information please see the Limited Warranty sheet included with your product.

Si ce produit doit être réparé au Canada, veuillez vous adresser à un distributeur autorisé Pioneer du Canada pour obtenir le nom du Centre de Service Autorisé Pioneer le plus près de chez-vous. Vous pouvez aussi contacter le Service à la clientèle de Pioneer:

> Pioneer Électroniques du Canada, Inc. Service à la clientèle 300, Allstate Parkway, Markham, Ontario L3R OP2 (905)479-4411 1(877)283-5901

Pour obtenir des renseignements sur la garantie, veuillez vous reporter au feuillet sur la garantie restreinte qui accompagne le produit.

> Published by Pioneer Corporation. Copyright @ 2000 Pioneer Corporation. All rights reserved.

PIONEER ELECTRONICS DE MEXICO S.A. DE C.V.

PIONEER CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153-8654, Japan

PIONEER ELECTRONICS [USA] INC. P.O. BOX 1540, Long Beach, California 90801-1540, U.S.A.

PIONEER ELECTRONICS OF CANADA, INC. 300 Allstate Parkway, Markham, Ontario L3R OP2, Canada PIONEER EUROPE NV

Haven 1087, Keetberglaan 1, B-9120 Melsele, Belgium TEL: 03/570.05.11 PIONEER ELECTRONICS AUSTRALIA PTY. LTD.

178-184 Boundary Road, Braeside, Victoria 3195, Australia, TEL: [03] 9586-6300 San Lorenzo 1009 3er Piso Desp. 302 Col. Del Valle Mexico D.F. C.P. 03100

TEL: 5-688-52-90

<TNGZW/00K00001> <XRB3004-A> Printed in